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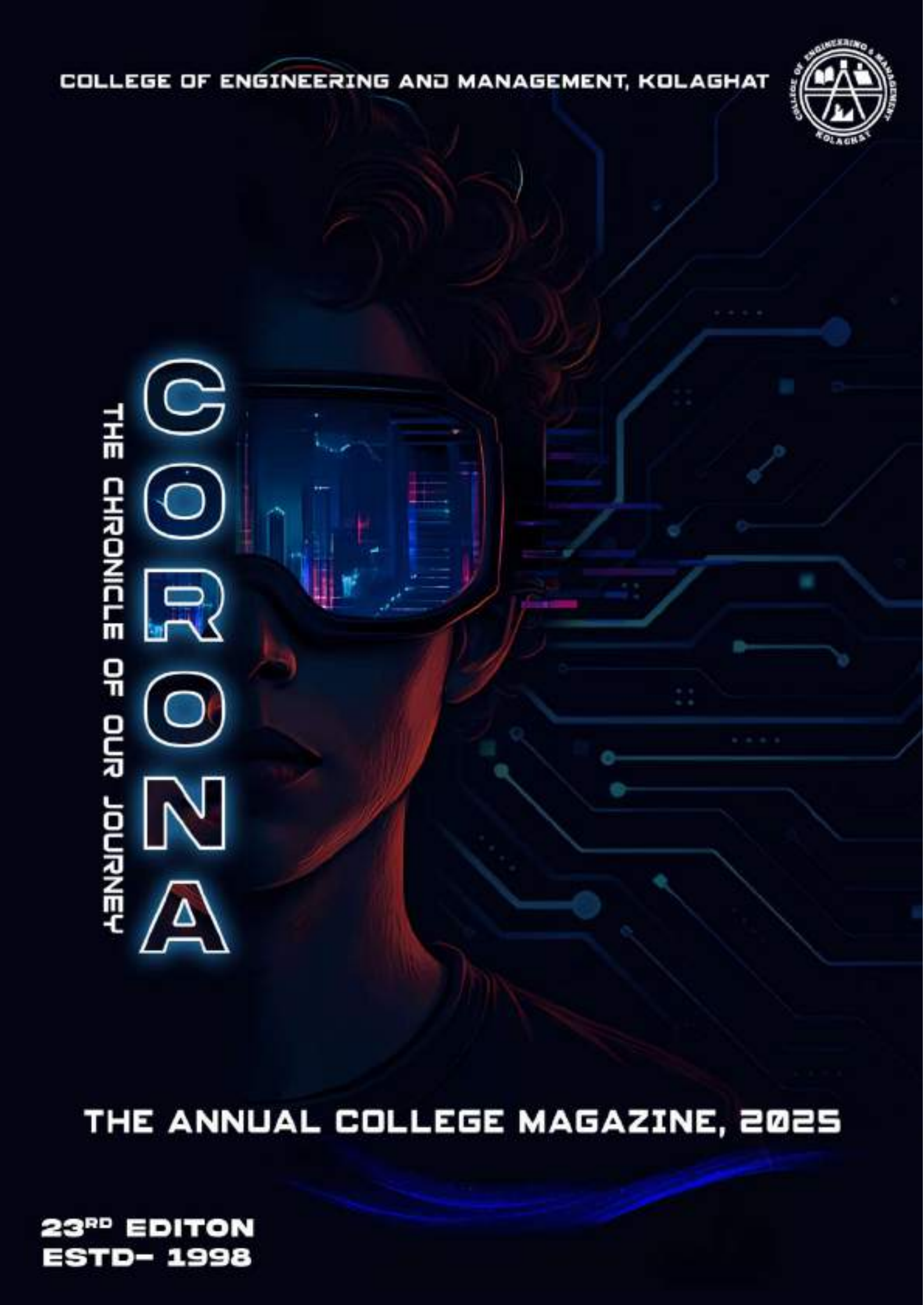

CORONA

THE CHRONICLE OF OUR JOURNEY

THE ANNUAL COLLEGE MAGAZINE, 2025

23RD EDITON
ESTD- 1998


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CORONA

'THE CHRONICLES OF OUR JOURNEY' THE

ANNUAL COLLEGE MAGAZINE

Estd. 1998

23rd Issue, 2025

Under Vidyasagar Society for Integrated Learning (VSIL)

A society established and run by

The Department of Power, Government of West Bengal

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CORONA, 23rd Issue, September 2025

Published by:

The Magazine Committee
College of Engineering and Management, Kolaghat

Cover Page Design:

Gourab Dhara (CSE/22/067)
Somnath Patra (CSE/22/097)

Printed By: J. K. Printers

W, A/5, Aurobindanagar,
Sabyasachi News Paper Office (1st Floor),
Paschim Medinipur, PIN-721101

ESTD. 1998

23rd Issue, 2025

Vision Statement of the College

Pursuing Excellence in Teaching Learning Process to Produce High Quality Engineering Professionals.

Mission Statement of the College

To enhance the employability of our students by imparting high quality technical and professional education with continuous improvement in monitoring of students' performance as per the expectation of various stakeholders.

To continuously upgrade, as well as broaden the knowledge base, along with promoting a culture of research for achieving excellence.

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01st September, 2025

MESSAGE

28th Foundation Day of 'College of Engineering & Management Kolaghat' is going to be organised on 23rd September, 2025 and the 23rd issue of College Magazine, '**CORONA**' is also going to be published on the college foundation day. Due to my preoccupied engagement I cannot be physically present on the special day.

I extend my best wishes to all the academic personnel and the students of the college and wish the publication all successes.

AROOP BISWAS

The Director
College of Engineering & Management
Kolaghat
West Ben_al

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Dr. P.B. Salim, IAS
Secretary
Department of MA & ME
Department of Programme Monitoring
Chairman & Managing Director
The West Bengal Power Development Corporation Limited

Message

"Education is the most powerful weapon which you can use to change the world."

Today, as we stand at a pivotal moment where the world is constantly evolving, we are faced with numerous challenges. However, even in this milieu, as I address you today on this significant occasion of our college's Foundation Day, I believe that we have been able to inculcate the required skills to our students to become the architects of their own destinies.

The publication of the college magazine provides a wonderful opportunity to reflect on our long journey, celebrate our collective milestones, and move forward for a better tomorrow.

I am filled with immense pride when I find that the college that was founded on a vision of academic excellence and holistic development, has over the years, transformed into a vibrant community of knowledge seekers and learners. The foundation laid by our predecessors, along with the unwavering dedication of all our faculty and staff, has built a sturdy base over the years, upon which we continue to grow.

Every year, we witness the blossoming of new talents and the fulfillment of dreams of our students. The commitment of our faculty and staff along with the passion of our students are the engines that drive the future of this college. We empower our students to become the leaders who will shape the future.

I hope the publication of this 23rd issue of CORONA will be able to reflect the intellectual curiosity and critical thinking associated with this college and will also share with its readers the success stories and innovations that have defined the year gone by.

(P. B. Salim)

Prof. Dr. Dilip Kumar Gayen
Director
College of Engineering & Management, Kolaghat,
West Bengal.

WBPDCL
The West Bengal Power Development Corporation Limited
MA & ME Department
Department of Programme Monitoring

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বিশেষ সচিব, পশ্চিমবঙ্গ সরকার
এবং
ডাইরেক্টর (এইচ আর) এবং চিফ ভিজিলান্স অফিসার
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MESSAGE

I am very glad to be invited in the 28th Foundation Day Celebration of College of Engineering & Management, Kolaghat under the aegis of Vidyasagar Society for Integrated Learning (VSIL) on 23rd September, 2025.

I convey my best wishes for the grand success of the celebration programme and expect such invitation for the days to come.

On this occasion, I would like to appreciate the impressive presentation of the College on the field of education since its inauguration.

I take this opportunity to congratulate all the associates responsible for publication of the 23rd issue of the College Magazine 'CORONA,' which will inspire the college students & other writers and provide a platform to them towards sharing their thoughts and showcasing creative abilities & talents.

(Bivash Kumar Mandal)

Prof. Dr. Dilip Kumar Gayen,
Director,
College of Engineering & Management, Kolaghat,
West Bengal

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THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED
(A Government of West Bengal Enterprise)
Kolaghat Thermal Power Station
PO : Mechheda • Dist : Purba Medinipur • PIN - 721 137

Memo. No. KTPP/GM/2487 Date : 08/09/2025

MESSAGE

I would like to extend my heartfelt congratulations to the students and faculty of the College of Engineering & Management, Kolaghat, on the auspicious occasion of the 28th Foundation Day and the publication of the magazine "CORONA"(23rd issue).

This magazine is not merely a collection of articles; it reflects the creativity, innovation and spirit of the students and faculty.

On behalf of KTPS, I convey my best wishes for the continued success of the college and its bright future ahead.

(Dipankar Dasgupta)
General Manager
KTPS :: WBPDCL

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From the Desk of Director

5th September, 2025

MESSAGE

"Excellence is not a destination; it is a continuous journey that never ends." — A. P. J. Abdul Kalam

The 27th Anniversary of the College of Engineering & Management, Kolaghat, is both a celebration of our past and a promise for the future. Founded in 1998 by Dr. Sankar Sen, the college has grown from humble beginnings into a vibrant hub of learning and innovation.

The vision and dedication of eminent educators like Prof. J. K. Das, Prof. B. Pal, and Prof. J. K. Sen laid the foundation for the academic strength we are proud of today. Our faculty, staff, and students continue to uphold this legacy, embracing new challenges and opportunities to stay at the forefront of engineering education.

The success of our alumni worldwide stands as proof of the values and knowledge imparted at CEMK. This year's 23rd edition of CORONA highlights the creativity and aspirations of our students and serves as a symbol of our dynamic spirit. Together, let us move forward with renewed energy, dedication, and purpose.

Prof. Dr. Dilip Kumar Gayen
Director

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EDITORIAL

5th September, 2025

It is my immense pleasure to present our 23rd issue of techno-cultural College Magazine "CORONA". This platform is showcasing the informative and colourful creation of students, staff and faculty's innovative minds.

Beside regular academic activity, extra-curricular participation like writing, drawing, photography etc., are also equally important for budding engineers to relax their mind from continuous class-room engagement and to learn managerial skill.

I express my deep sorrow and condolence on behalf of every one of this esteem institute to recently losing great human being, Prof. B K Pal sir, Dr. Sukanta Samanta Sir and Mr. Mousam Mandal, via this platfom. I do sincere prayer for their departed soal to rest in peace. Their huge contribution for flourishing this Institute will never be forgotten.

I will take this opportunity to express my sincere thanks to College Authority for keeping trust on me since the year 2019 as convener of this Magazine "CORONA". I also wholeheartedly thank the students, the magazine committee, the editorial board along with other stake holders for their valuable supports in publishing this magazine.

Finally, I wish you all a very happy, healthy and joyful festive season ahead.

Deb Kumar Adak

Dr. Deb Kumar Adak
Assistant Professor
Convener, College Magazine

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DEPARTMENTAL RESEARCH PUBLICATION

Computer Science and Engineering

International Journal

1. **Dilip Kumar Gayen** and T. Chattopadhyay, "Equivalent artificial neural network model of optically driven electro-optic Mach-Zehnder interferometer", Optical Engineering, 63 (10), 108106, 2024, DOI:https://doi.org/10.1117/1.OE.63.10.108106 (SCI indexed).

2. T. Chattopadhyay and **Dilip Kumar Gayen,** "Binary increment operation using CRSOA-MZI switches", Optics Communications,584, 131800, 2025, DOI:https://doi.org/10.1016/j.optcom.2025. 131800 (SCI indexed).

3. P. M. Cuce, E. Cuce, D. K. Mandal, **Dilip Kumar Gayen,** M. Asif, A. Bouabidi, S. Alshahrani, C. Prakash, M. E. M. Soudagar, "ANN and CFD driven research on main performance characteristics of solar chimney power plants: Impact of chimney and collector angle", Case Studies in Thermal Engineering, Volume 60, 104568, 2024, DOI: https://doi.org/10.1016/j.csite.2024.104568.

4. **Dilip Kumar Gayen** and T. Chattopadhyay, "Sigmoid activation function generation by photonic artificial neuron (PAN)", Optical and Quantum Electronics, 56 (2), 145, 2024, DOI: https://doi.org/10.1007/s11082-023-05618-7 (SCI indexed).

5. Barman, A., Saha, D. & **Pal, A.R.,** "Bengali reduplication generation with finite-state transducers (FSTs)", International Journal of Speech Technology, 27, 729737 (2024). https://doi.org/10.1007/s10772-024-10124-6. (SCI).

6. Barman, A., Saha, D. & **Pal, A.R.,** "An upgraded approach for identifying partially reduplicated forms in bengali text", SN COMPUT. SCI. 5, 892 (2024). https://doi.org/10.1007/s42979-024-03069-9. (Scopus).

7. **Sushovan Das,** U.K. Mondal, "Pilot agent implied efficient data communication in pervasive acoustic wireless sensor network", Telecommunication Systems 88, 50 (2025). https://doi.org/10.1007/s11235-025-01281-3, (Springer Nature and indexed with Web of Science, SCIE, Scopus , Google Scholor, Inspec e.t.c).

8. **Sushovan Das,** U.K. Mondal, "Acoustic data acquisition and integration for semantic organization of sentimental data and analysis in a PWSN", Multimedia Tools and Application (2024). https://doi.org/10.1007/s11042-024-20229-4, (Springer Nature and indexed with Web of Science, SCIE, Scopus, Google Scholor, Inspec e.t.c).

9. Bibek B Roy, **Sushovan Das,** Uttam Kr Mondal, "Tiny ML-driven sensor nodes for energy-efficient acoustic event detection in pervasive acoustic WSNs", Journal of Telecommunications and Information Technology (2025). https://doi.org/10.26636/jtit.2025.2.2084, (National Institute of Telecommunications, Poland Scopus, Inspec, DBLP, Google Scholor e.t.c).

10. Dutta, A., Kumar, P.K., Lakshmanan, K. **Ghosh, S.,** "SADAK: simple, and automatic detection of accidents on roads using Kolmogorov-Arnold networks", International Journal of Information Technology(2025), 2511-2112. doi:10.1007/s41870-024-02381-0.

11. **Siddhartha Chatterjee,** Meghna Sarkar, Sudipta Hazra, Anurag Sinha, M. Sazid Reza and Mohd Asif Shah. February, "Analyzing why AI struggles with drawing human hands with CLIP", In F1000 (2025). Research (Taylor and Francis Group), Open Access Peer Reviewed, SCOPUS Indexed, DOI:10.12688/f1000research.159688.1.

International Conference

1. Bibek Bikash Roy, Asish Debnath, **Sushovan Das,** and Uttam Kr. Mondal, "Efficient audio CODEC for IoT devices - leveraging GANs, adaptive quantization and arithmetic coding", in Computational Intelligence in Communications and Business Analytics (Jadavpur University).

2. Lipika Datta, "Deadline constrained least laxity time-based cloudlet scheduling", 2024 International Conference on Computing, Semiconductor, Mechatronics, Intelligent Systems and Communications (COSMIC), November 2024. DOI:10.1109/COSMIC63293.2024.10871672.

3. A. Dutta, S. Ray, L. Kumarasankaralingam, P. K. Kumar, **S. Ghosh** and P. Kumar, "Machine versus human intelligence: an illustration from the CSES problem set", 2024 International Conference on Artificial Intelligence and Emerging Technology (Global AI Summit), Greater Noida, India, 2024, 541-545, doi:10.1109/GlobalAISummit62156.2024.10947788.

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5. **Siddhartha Chatterjee,** Rajdeep Chatterjee Saikat Samanta and Suman Biswas, "AI Approaches to Investigate EEG Signal Classification for Cognitive Performance Assessment", In the 6th International Conference on Computational Intelligence and Networks (CINE 2024), IEEE Conference Record#63708, IEEE Computer Society, IEEE CTSoc, IEEE Digital Explore indexed by SCOPUS and Web of Science (WoS), 1-23, February, 2025, DOI:10.1109/CINE63708.2024.10881208.

6. **Siddhartha Chatterjee,** Sima Das, Samik Acharya, Ritwika Ghosh and Anwesa Naskar, "Early Diagnosis: Alzheimer's and Parkinson's Disease Detection using Machine Learning Techniques" in the Proceedings of International Conference on Data Analytics and Insights (ICDAI-2024), Springer Singapore, DOI: https://doi.org/10.1007/978-981-96-3287-9_16 LNNSBook Series, SCOPUS Indexed, vol. 1233, pp. 189-197 on 15th July 2025.

7. **Siddhartha Chatterjee,** Sudipta Hazra, Rituparna Mondal and Anwesa Naskar, "Analysis and Comparison Study of Cardiovascular Risk Prediction using Machine Learning Approaches", in the Proceedings of International Conference on Advanced Computing and Systems (AdComSys2024), Springer Nature Book Series, Singapore, "Algorithm for Intelligent_Systems". SCOPUS, WoS, DOI:https://doi.org/10.1007/978-981-97-9532-1_11 pp. 125-134 on 23rd July 2025.

8. **Siddhartha Chatterjee,** Sutirtha Kumar Guha, Somasree Bhadra, Sudipta Hazra, and Abhinaba Bhattacharyya, "Classical Optimization Problem Solution using Nature Inspired Algorithm", in IEEE 4th International Conference on Recent Advances in Electrical, Electronics, Ubiquitous Communication and Computational Intelligence (RAEEUCCI-2025), IEEE Xplore Digital Library, IEEE Madras Section, pp. 1-5, DOI:10.1109/RAEEUCCI63961.2025.11048319, ISBN: 979-8-3503-9266-1,SCOPUS & DBLP Indexed on 28th June, 2025 organized by SRMIST, Tamil Nadu, India.

Authored Book

1. **Siddhartha Chatterjee,** Chiranjib Dutta, Aniruddha Das and Nelkantha Dey, "Data Structure & Algorithm: A Practical Approach". Published by Chyren Publication on 10/02/2025, vol.1, Edition-1, pp.1-256. ISBN: 9789349076433. Available at https://www.flipkart.com/product/p/time?pid=9789349076433

Book Chapters

1. **Dilip Kumar Gayen,** "All-optical binary decremental using terahertz optical asymmetric demultiplexer switches", In: El Ghzaoui, M., Das, S., Samudrala, V., Medikondu, N.R. (eds) Next Generation Wireless Communication. Signals and Communication Technology. Springer, Cham., 2024, DOI: https://doi.org/10.1007/978-3-031-56144-3_34.

2. **Dilip Kumar Gayen,** "AI-Based Movie Recommendation System", In: Edited By Sagaya Aurelia, Ossama Embarak, Industry 4.0 Key Technological Advances and Design Principles in Engineering, Education, Business, and Social Applications, CRC Press, 2024, DOI: https://doi.org/10.1201/9781003343332.

3. **Sushovan Das,** U.K. Mondal (2025), "Energy efficient lossless audio encoder for IoT enable devices", In: Majumder, M., Zaman, J.S.U., Ghosh, M., Chakraborty, S. (eds) Computational Technologies and Electronics. ICCTE 2023. Communications in Computer and Information Science, vol 2377. Springer (Scopus), Cham. https://doi.org/10.1007/978-3-031-81981-0_10.

4. **Sushovan Das,** U.K. Mondal (2025), "Designing a context-aware virtual machine (CWVM) to enhance data integration in pervasive wireless sensor networks (PWSN)•h, In: Majumder , M., Zaman, J.S.U., Ghosh, M., Chakraborty, S. (eds) Computational Technologies and Electronics. ICCTE 2023. Communications in Computer and Information Science, vol 2377. Springer, Cham. https://doi.org/10.1007/978-3-031-81981-0_9

Indian Patents

1. **Sushovan Das,** Uttam Kumar Mondal, Utpal Ghosh, Asish Debnath, Design Patent, "Low-cost portable AI enhanced ultrasonic device for metal density and uniformity assessment", Filing on 30.12.2024, Patent Application No-442478-001, Journal No 10/2025, Journal Date07/03/2025.

2. **Sushovan Das,** Uttam Kumar Mondal, Utpal Ghosh, Patent, "Low-cost integrated support device for remote reading of non-accessible electrical meters", Patent Application No- 202431098127, Journal No . 15/2021, Dated: 12/12/2024, under Intellectual Property India, Govt of India.

3. **Sushovan Das,** Uttam Kumar Mondal, Sushovan Das, Asish Debnath, Bibek B. Roy, Rajdeep Chakraborty, "AI enabled acoustic profiling for detecting faults in automatic motor vehicles" under Intellectual Property India, Govt. of India. Patent Application No- 202531043692, Journal No. 22/2025 Dated 30/05/2025, under Intellectual Property India, Govt. of India.

Electronics and Communication Engineering

International Journal

1. **Bikash Chandra Bag, Hirak Kumar Maity,** Chaitali Koley, "Data hiding on digital images using Deep Neural Network (DNN)", Journal of Mechanics of Continua and Mathematical Sciences, 19, 8, 27-40 (2024). https://doi.org/10.26782/jmcms.2024.08.00003. (ESCI/Scopus).

2. **S. Pramanik,** S. Bhaumik, S. Bhunia, and C. Koley, "Broadband metasurface-based reflective polarization converter", Frequenz, 79, 5.6, 241.246 (2025). https://doi.org/10.1515/freq-2024-0306. (Scopus/SCIE).

3. **D. K. Dey** et al., "Understanding of efficient optical circuit using silicon waveguide at third communication window", Journal of Optics (2024). https://doi.org/10.1007/s12596-024-02189-y. (Scopus).

4. **D. K. Dey** et al., "Efficient photonic integrated circuit for enhanced optical communication system", Journal of Optics (2025). https://doi.org/10.1007/s12596-025-02680-0. (Scopus).

5. S. Pramanik, S. Bhaumik, **S. Bhunia,** and C. Koley, "Broadband metasurface-based reflective polarization converter", Frequenz, 79, 5.6, 241.246 (2025). https://doi.org/10.1515/freq-2024-0306. (Scopus/SCIE).

Basic Science and Humanities

International Journal

1. **Indrajit Ghosh,** Ananya Roy, Vanshika Gupta and Shruti Bhattacharya, "Quantitative assessment of relative humidity, K index and TT index using programmatic analysis", Journal of Mechanics of Continua and Mathematical Sciences. Vol.-20, No.-6, June (2025), 225 - 245. https://doi.org/10.26782/jmcms.2025.06.00014 ISSN (Online): 2454 -7190 (Scopus Indexed).

Information Technology

International Journal

1. Surajit Chattopadhyay, Tamal Roy, Mrityunjoy Midya, "Wavelet decomposition driven machine learning for mechanical vibration dependent fault detection in automotive air circular system", IEEE Sensors Journal, 24, 16, 26148-26158 (2024), IEEE, DOI: 10.1109/JSEN.2024.3423304, Print ISSN: 1530-437X, Electronic ISSN: 1558-1748 CD: 2379-9153; SCI, Impact Factor 4.3.

Mechanical Engineering

National conference

1. Deb Kumar Adak, Bidhan Chandra Gayen, Santanu Das and Barun Haldar, "Study of abrasive jet drilling operation on soda lime glass at 8 kg/cm2 system pressure", West Bengal State 7th Regional Science & Technology Congress-2024-25, Organized by Midnapore College (Autonomous Affiliated to Vidyasagar University). 03-04 January, 2025.

2. **Deb Kumar Adak,** Alakesh Maity and Saikat Jana, "Study of Drilling Soda-lime Glass by Airabrasive Jet using SiC Abrasive with Varying Impingement Angle", Recent Advancements in Manufacturing Technology & Management, RAMTM . II 2025, 16-17th January 2025, Jadavpur University.

International conference

1. **Tarun Kanti Pal,** Anjan Bhunia and Himadri Chattopadhyay, "Enhanced Transport under Impinging Circular Jet by Introducing Square Rib", Conference Proceedings, 72-73, ISBN: 978-93-89947-92-2 (eBook), International Conference on Multidisciplinary Research in Mechanical Engineering and Nanotechnology ICMRMEN 2025, April 5th to 6th , 2025, GEC, Samastipur, Bihar.

2. **Deb Kumar Adak,** Bidhan Chandra Gayen, Santanu Das and Barun Haldar, "Study on abrasive jet drilling of soda-lime glass under varying abrasive jet with SiC abrasive at 4 kg/cm2 system pressure", 1st International Conference on Advances Innovations in Engineering, Science and Technology (AIEST-2024), Abacus Institute of Engineering and Management (AIEM), Mogra, Hooghly, West Bengal.

3. **Deb Kumar Adak,** Bidhan Chandra Gayen, Santanu Das and Barun Haldar, "Surface preparation with abrasive jet erosion on SS 316 using Silicon Carbide". 5th International Conference on Advanced Engineering Optimization through Intelligent Techniques (AEOTIT), Sardar Vallabhbhai National Institute of Technology, Surat, India, 28-30 November, 2024.

Book Chapters

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College of Engineering & Management, Kolaghat

Details of Recruitment Drives organized for the Year 2024-2025(for 2025 Passout batch)

Sl. No.	Date of Drive	Name of the Recruiting organisation	Eligible Streams
1	25.05.2024	Intellipaat Technical Content Writer	CSE, IT, ECE
2	15.06.2024	Cogitate Technology Solutions	CSE, IT, ECE
3	05.07.2024	Promact Infotech	CSE, IT
4	12.07.2024	Telaverge Communications India	CSE, IT
5	25.07.2024	Namura Research Institute (NRI) Fintech	CSE, IT, ECE, EE, ME
6	01.08.2024	Bavistech	CSE, IT, ECE, ME
7	06.08.2024	rtCamp Solutions	CSE, IT
8	13.08.2024	Recruit CRM	CSE, IT, ECE
9	20.08.2024	KELP Global	CSE, IT
10	04.09.2024	Windmöller & Hölscher India (WHI)	EE
11	15.09.2024	Visteon Corporation	CSE, IT, ECE, EE
12	16.09.2024	Excelsource International Private Limited	EE, ME
13	25.09.2024	Emipro Technologies	ME
14	16.10.2024	Manikaran Power	ECE, EE
15	31.10.2024	Ethane Web Technologies	CSE, IT, ECE
16	06.11.2024	Windcare India	ECE, EE, ME
17	09.11.2024	ApMoSys Technologies	CSE, IT, ECE
18	12.11.2024	Junomoneta Finsol	CSE, IT, ECE, EE, ME
19	14.11.2024	Sanmar Group	ME
20	15.11.2024	Corelynx Solutions	CSE, IT, ECE
21	18.11.2024	Silversky Technologies	CSE, IT, ECE
22	19.11.2024	Polycab India Pvt. Ltd.	ECE, EE, ME
23	22.11.2024	ARODEK	CSE, IT, ECE, EE
24	26.11.2024	Roima Intelligence India	CSE, IT, ECE
25	29.11.2024	PlanetSpark	CSE, IT, ECE, EE, ME
26	30.11.2024	Yazaki	ECE, EE, ME
27	30.11.2024	Greenwave Solutions	CSE, IT, ECE
28	03.12.2024	Mahavir Ferro Alloys	CSE, IT, ME
29	06.12.2024	SigiloTech	CSE, IT, ECE, EE
30	07.12.2024	Desun Technology	CSE, IT
31	09.12.2024	Vyrazu Labs	CSE, IT, ECE
32	11.12.2024	PCS Global	CSE, IT, ECE
33	13.12.2024	A1 Future Technologies	CSE, IT, ECE
34	17.12.2024	Techmonastic Solutions	CSE, IT, ECE
35	18.12.2024	Brainium	CSE, IT
36	18.12.2024	Rudder Analytics	CSE, IT
37	23.12.2024	Express Roadways	CSE, IT, ECE, EE, ME
38	27.12.2024	TVS Brakes-Mainak-9002410001	ECE, EE, ME
39	28.12.2024	Sett Consultant	CSE, IT
40	03.01.2025	Infosys Technologies	CSE, IT, ECE, EE, ME
41	12.01.2025	Addend Analytics	CSE, IT
42	16.01.2025	Campus Component	ECE
43	21.01.2025	Banco Products (India) Ltd.	ECE, EE, ME
44	30.01.2025	R R Kabel Ltd.	EE
45	05.02.2025	Rashmi Metaliks Ltd.	EE, ME
46	08.02.2025	TIMES	ME
47	08.02.2025	Jai Balaji Group	EE, ME
48	19.02.2025	QualityKiosk Technologies	CSE, IT, ECE
49	21.03.2025	Duttcon Consultants	ME
50	24.03.2025	Hashedin Technologies By Deloitte	CSE, IT

51	24.03.2025	Keeves Technologies	CSE, IT, ECE, EE, ME
52	25.03.2025	TCS-NQT	CSE, IT, ECE, EE, ME
53	25.03.2025	Surella Infosystems	CSE, IT, ECE
54	26.03.2025	Skipper Ltd.	EE, ME
55	28.03.2025	Tutopia Private Limited	CSE, IT, ECE, EE, ME
56	30.03.2025	Chelson Gordon Consultancy	CSE, IT, ECE, EE, ME
57	07.04.2025	Laxmi Agni Components & Forgings	ECE, EE, ME
58	11.04.2025	Rinex Technologies	CSE, IT, ECE, EE, ME
59	15.04.2025	Cognizant	CSE, IT, ECE, EE, ME
60	16.04.2025	Bharat Financial Inclusion Limited	CSE, IT, ECE, EE, ME
61	17.04.2025	Vidhyapeet Skill Intern Private Limited	CSE, IT, ECE, EE, ME
62	18.04.2025	L&T Off-campus drive	ME
63	19.04.2025	Siechem Technologies Private Limited	ECE, EE, ME
64	22.04.2025	Vidyanth Edutech Private Limited	CSE, IT, ECE, EE, ME
65	22.04.2025	InterralT	CSE, IT
66	24.04.2025	Sutherland Global	CSE, IT, ECE, EE, ME
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68	02.05.2025	BayOne Solutions Inc.	CSE, IT, ECE, EE
69	08.05.2025	Hitachi Hi-Rel Power Electronics Private Limited	ECE, EE
70	10.05.2025	CloudKaptan	CSE, IT
71	12.05.2025	Marut Air Systems	EE, ME
72	16.05.2025	Bitpastel Solution	CSE, IT
73	16.05.2025	Trisys IT Services Private Limited	CSE, IT
74	18.05.2025	Cyfuture India	CSE
75	21.05.2025	Karmick Solutions	CSE, IT, ECE
76	21.05.2025	Polyhose India (Rubber) Private Limited	ECE, EE, ME
77	22.05.2025	Kreeti Technologies	CSE, IT, ECE
78	23.05.2025	Shyam Metaliks	EE, ME
79	25.05.2025	Liugong India Private Limited	EE, ME
80	27.05.2025	PriceWater House Coopers	CSE, IT, ECE, EE
81	05.06.2025	ARF Design	ECE, EE
82	10.06.2025	PAIAS Reliability Services	EE
83	10.06.2025	Exavalu	CSE, IT
84	15.06.2025	Delphi TVS, Oragadam Plant	ECE, EE, ME
85	19.06.2025	Gamut Infosystems	CSE, IT
86	07.07.2025	Apexium Technologies	CSE, IT
87	10.07.2025	Polybond India Private Limited	ECE, EE, ME
88	16.07.2025	WTi Cabs	CSE, IT

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Carrier-Reservoir Semiconductor Optical Amplifiers

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***Abstract*— Carrier-reservoir semiconductor optical amplifiers (CR-SOAs) are emerging as promising devices for ultrafast all-optical signal processing, overcoming the limitations of conventional semiconductor optical amplifiers (SOAs). By incorporating an additional carrier reservoir layer near the active region, CR-SOAs achieve faster gain recovery, reduced pattern dependence, and enhanced nonlinear phase shifts. These properties make them particularly suitable for high-speed optical logic, wavelength conversion, and computing applications. This paper presents the principles, design, and modeling of CR-SOAs, compares their performance with other SOA architectures, and discusses their potential applications in next-generation photonic networks and computing systems.**

Keywords- Carrier-Reservoir SOA, Optical Amplifier, Gain Dynamics, All-Optical Logic, Mach-Zehnder Interferometer.

I. INTRODUCTION

Semiconductor optical amplifiers (SOAs) are widely used in all-optical signal processing because of their compact size, integrability, and ability to amplify optical signals directly without optical-electrical-optical (O/E/O) conversion. However, conventional SOAs suffer from slow gain recovery (hundreds of picoseconds) due to long carrier lifetimes in the active region, which limits their use in high-speed applications [1].

To address this challenge, carrier-reservoir SOAs (CR-SOAs) have been developed. A carrier reservoir layer is placed adjacent to the active region, with a higher bandgap energy. The reservoir acts as a rapid source of carriers, replenishing the active region within a few picoseconds (0.5–5 ps), thereby enabling much faster gain and phase recovery [1]. CR-SOAs thus combine the advantages of bulk and quantum-dot SOAs, offering scalability with significantly improved performance. Recent research has demonstrated CR-SOAs in applications such as binary incrementors [2], all-optical logic gates [3], and ultrafast switches, highlighting their importance in high-speed photonic computing [4].

II. DESIGN AND MODELLING OF CR-SOA

The CR-SOA structure consists of two main layers. Active Region (AR): where electron–photon interaction occurs, providing optical gain. Carrier Reservoir (CR): a layer with a larger bandgap, located near the AR, which stores carriers and quickly transfers them to AR during depletion. Figure-1 shows the band energy diagram with different levels.

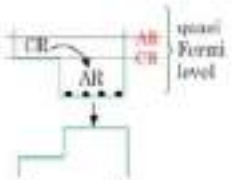

Fig. 1: CRSOA model with band energy diagram

III. Rate Equation Model

The dynamics of CR-SOAs are governed by coupled nonlinear differential equations describing carrier densities in AR and CR, recombination processes, and carrier transfer between CR and AR [1]. Carrier heating (CH) and spectral hole burning (SHB) are also considered, as they influence gain suppression. The effective gain of the CR-SOA can be expressed as:

$$G(t)=\exp[h_{AR}(t)+h_{CH}(t)+h_{SHB}(t)]$$

where h_{AR}, h_{CH}, and h_{SHB} represent contributions from the active region, carrier heating, and spectral hole burning, respectively.

IV. Switching Configurations of CR-SOAs

Carrier-Reservoir Semiconductor Optical Amplifiers (CR-SOAs) are widely adopted in all-optical switching owing to their ultrafast gain recovery, high nonlinearity, and compatibility with photonic integration. By integrating a carrier reservoir layer near the active region, CR-SOAs provide rapid carrier replenishment (0.5–5 ps), enabling switching speeds above 100 Gb/s [1]. Depending on the design, CR-SOAs can be used in different switching configurations, often combined with interferometric or coupling structures.

a. Mach–Zehnder Interferometer (CRSOA-MZI) Switches

Principle: Uses two CR-SOAs placed in the arms of an MZI. Control pulses induce gain and phase modulation in one or both arms, leading to constructive or destructive interference at the output. Advantages: High extinction ratio, ultrafast operation, scalable to multi-bit logic. Applications: Optical logic gates (AND, OR, NOR, XOR), binary incrementors [1]. Performance: Switching speeds >100 Gb/s have been reported due to fast recovery.

b. Cross-Gain Modulation (XGM)

Principle: A strong control pulse depletes carriers in the CR-SOA, reducing the gain available for a weaker probe signal. Output: The probe is modulated inversely with respect to the control signal. Advantages: Simple configuration, does not require interferometric stability. Limitation: Limited extinction ratio and higher pattern dependence compared to MZI-based switches. Applications: Wavelength conversion and power-controlled switching.

c. Cross-Phase Modulation (XPM) in CRSOA

Principle: Carrier-induced refractive index changes inside the CR-SOA lead to phase modulation of a probe signal. When combined with an interferometer (MZI or Michelson), this phase change is converted into intensity modulation. Advantages: Higher switching contrast than XGM. Applications: Wavelength conversion, phase-encoded logic operations. Note: CR-SOAs offer enhanced phase nonlinearity compared to bulk SOAs

d. Cross-Phase Modulation (XPM) in CRSOA

Principle: Carrier-induced refractive index changes inside the CR-SOA lead to phase modulation of a probe signal. When combined with an interferometer (MZI or Michelson), this phase change is converted into intensity modulation. Advantages: Higher switching contrast than XGM. Applications: Wavelength conversion, phase-encoded logic operations. Note: CR-SOAs offer enhanced phase nonlinearity compared to bulk SOAs.

e. Reflective CRSOA (R-CRSOA) Switches

Principle: A CR-SOA is used with a reflective configuration where input and output share the

same port. Advantages: Reduced footprint and cost, useful for integration in passive optical networks. Applications: Optical add/drop multiplexing, wavelength routing.

V. Comparative Study with Different SOA Types

Different types of semiconductor optical amplifiers (SOAs) have been explored to overcome the speed and performance limitations of conventional bulk SOAs. Bulk SOAs, while simple and cost-effective, suffer from slow gain recovery times in the range of hundreds of picoseconds, making them unsuitable for ultra-high-speed operations. Quantum-dot SOAs (QD-SOAs) offer significant improvement by exploiting carrier transfer from the wetting layer to quantum dots, resulting in gain recovery times of only a few picoseconds. This enables operation up to 160 Gb/s, but their practical deployment is restricted by complex and costly fabrication processes required to achieve uniform dot sizes [1]. Reflective SOAs (R-SOAs) provide compactness and reduced footprint by combining amplification and reflection in a single device, which makes them useful in optical access networks and add/drop multiplexing applications, though their gain recovery is still slower compared to QD-SOAs and CR-SOAs. Photonic crystal SOAs (PhC-SOAs) utilize photonic bandgap effects to achieve strong light confinement and moderate speed improvements, but their nanofabrication complexity limits scalability. In contrast, carrier-reservoir SOAs (CR-SOAs) present the best balance of speed, scalability, and power efficiency. By introducing a carrier reservoir layer near the active region, CR-SOAs achieve ultrafast carrier replenishment within 0.5–5 ps, drastically reducing pattern dependence and enabling reliable operation beyond 100 Gb/s [2]. Unlike QD-SOAs, they avoid the challenge of maintaining uniform quantum structures while still offering high nonlinearity and enhanced phase response. Thus, CR-SOAs combine the advantages of conventional and advanced SOA designs, making them highly promising for future high-speed all-optical computing, logic processing, and wavelength conversion systems [3].

VI. Conclusion

Carrier-reservoir semiconductor optical amplifiers (CR-SOAs) represent a significant advancement over conventional SOAs. By utilizing a carrier reservoir to provide ultrafast carrier replenishment, CR-SOAs achieve gain recovery times as low as a few picoseconds, making them ideal for high-speed all-optical processing. Comparative analysis shows that CR-SOAs balance speed, scalability, and fabrication feasibility better than other SOA variants. Their integration into photonic circuits, particularly with MZIs, demonstrates strong potential for optical logic, wavelength conversion, and computing applications, paving the way for next-generation all-optical networks and processors.

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''Nature's Unified Scientific Path: From Atoms to Galaxies''

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When we observe the universe, from the tiniest particles inside an atom to the vast galaxies spread across space, we realize that Nature itself behaves like the greatest scientist. Every law of physics we discover is already present in nature, working perfectly without error. Human scientists only reveal, test, and interpret these principles.

1. At the **Nuclear Level** nature controls the stability of atoms and nuclei through well-defined physical laws that determine how matter holds together and transforms, the **Nuclear Forces – Nature's Glue**. Atoms are stable only because of a special kind of force acting inside the nucleus: the strong nuclear force.

- It binds protons and neutrons together inside the nucleus, overcoming the electrostatic repulsion between positively charged protons.
- This force is short-ranged (effective only within 10^{-15} m, about the size of a nucleus) but is the strongest known force in nature. Without the strong nuclear force, no atom could exist, and hence no life, planets, or stars.

Elementary Particles – Nature's Building Blocks. At the most fundamental level, matter is made up of elementary particles.

- Quarks combine to form protons and neutrons (nucleons).
- Electrons orbit the nucleus, defining chemical properties.
- Neutrinos and other particles emerge in nuclear reactions, carrying away energy and momentum.

These particles interact via the four fundamental forces:

1. Strong Nuclear Force (binding nucleons in nuclei).
2. Electromagnetic Force (binding electrons to nuclei).
3. Weak Nuclear Force (responsible for beta decay and fusion in stars).
4. Gravitation (dominates at cosmic scales), the weakest but most pervasive force, affecting all objects with mass.

Radioactive Decay Law, $N(t) = N_0 e^{-\lambda t}$, here, N_0 is the initial number of radioactive nuclei and λ is the decay constant. This law shows that unstable nuclei spontaneously transform into more stable forms by emitting radiation (alpha, beta, or gamma rays). This natural process is not random chaos but follows a precise exponential law, releasing energy that powers both nuclear reactors on Earth and the fusion reactions inside stars.

Einstein's Mass–Energy Equivalence:- $E = mc^2$. This famous relation demonstrates that a small amount of mass can be converted into a tremendous amount of energy.

- In nuclear fission, heavy nuclei like Uranium-235 split into smaller nuclei, releasing energy (basis of nuclear power and atomic bombs).

- In nuclear fusion, light nuclei like hydrogen combine to form helium, releasing enormous energy (this powers our Sun and other stars). Thus, nature constantly recycles mass and energy, keeping a cosmic balance.

2. **Quantum Mechanics**: Nature's Microscopic Rules:- When we zoom into the subatomic world of electrons, photons, and quarks, we find that classical physics fails to explain their behavior. Instead, quantum mechanics emerges as the language of nature. Unlike classical mechanics, which predicts exact outcomes, quantum mechanics deals with probabilities, showing that nature has its own mysterious but precise set of rules. Quantum mechanics also shows that nature gives particles a dual identity, and uncertainty at the atomic level.

Schrödinger's Wave Equation: $i\hbar\frac{\partial\psi}{\partial t} = \hat{H}\psi$, this equation describes how the wavefunction (ψ) of a system evolves over time.

- The wavefunction does not tell us exactly *where* a particle is, but instead gives the probability distribution of finding it in a certain region.

- For example, in the hydrogen atom, Schrödinger's equation explains why electrons stay in discrete orbits/energy levels instead of collapsing into the nucleus. Thus, nature uses quantum laws to ensure stability of matter at the atomic scale.

Elementary Particles and Quantum Fields Quantum mechanics combined with relativity leads to Quantum Field Theory (QFT), where particles are seen as excitations of underlying fields.

- Electrons come from the electron field.

- Photons come from the electromagnetic field.

- Quarks and gluons obey the rules of Quantum Chromodynamics (QCD), the theory of the strong nuclear force.

Nature's design at this scale is therefore not just about particles, but about fields and interactions, which create a rich variety of matter.

Quantum computing is a new form of computation that harnesses quantum mechanical phenomena like superposition and entanglement to solve complex problems that are intractable for classical computers. Instead of classical bits, quantum computers use qubits, which can represent both 0 and 1 simultaneously, allowing for massively parallel calculations. This enables them to tackle tasks in areas like drug discovery, materials science, and cryptography at speeds far beyond current classical systems.

3. **Statistical Mechanics: Order in Chaos :-** When we deal with trillions of particles — as in gases, liquids, stars, or galaxies — it is impossible to track each particle individually. Yet, nature has a way to organize collective behavior so that large systems follow predictable rules. This is the power of statistical mechanics, which uses the language of probability to explain how microscopic randomness leads to macroscopic order. Statistical mechanics links the microscopic randomness of particles with macroscopic physical quantities such as pressure, temperature, and energy.

Bridge Between Classical and Quantum Mechanics : - Statistical mechanics forms a bridge between the predictable world of classical physics and the probabilistic world of quantum mechanics:

- In classical mechanics, we assume particles follow precise trajectories (Newton's laws).
- In quantum mechanics, particles are described by probabilities (wavefunctions).
- Statistical mechanics unites both by focusing on the average behavior of large ensembles of particles, whether classical or quantum.

Statistical mechanics shows that nature is a scientist of probabilities. By averaging out the randomness of countless particles, it produces reliable laws of thermodynamics, explaining everything from the expansion of gases to the glow of stars. Most importantly, it connects classical mechanics with quantum mechanics, proving that whether we study atoms or galaxies, probability is the hidden thread of order in chaos. The Fermi level is a key concept in this framework, representing the highest energy occupied by a fermion at absolute zero, as defined by Fermi-Dirac statistics. Modern computers are essential for applying these concepts, enabling complex simulations and calculations of systems involving many particles, such as the electronic behavior of metals and semiconductors where the Fermi level is crucial for understanding material properties and designing electronic devices.

4. Classical Mechanics: Motion Everywhere :- From a falling apple to planetary motion, Newton's laws reveal that nature works with elegant simplicity.

- Newton's Second Law $F = ma$, applies universally, whether for a rolling ball or an orbiting satellite.
- Universal Law of Gravitation $F = G\frac{m_1 m_2}{r^2}$, governs planetary motion, tides, and even the dynamics of galaxies.

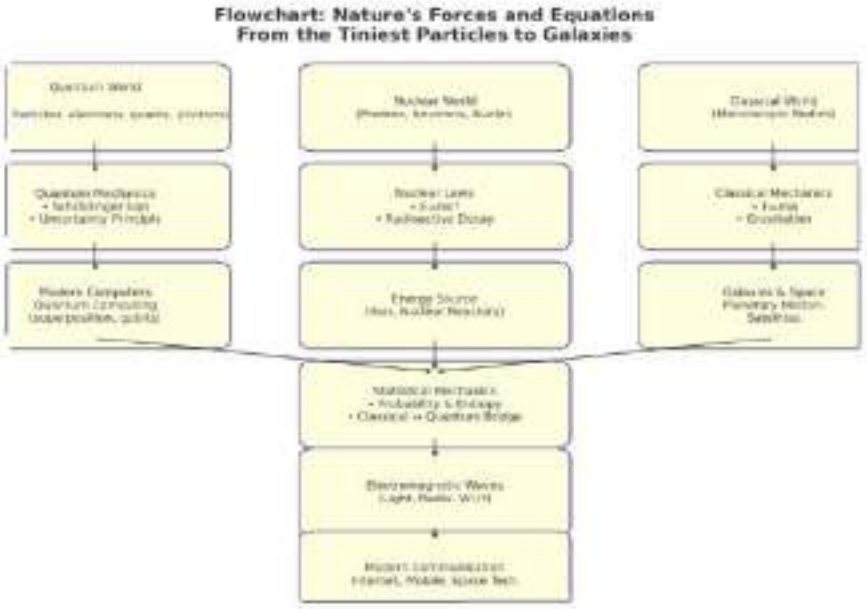
5. **Electromagnetic Laws: Nature's Communication System:**- Every interaction of light, electricity, and magnetism is beautifully explained by **Maxwell's Equations:**

$$\oint \vec{E}.d\vec{A} = \frac{1}{\varepsilon_0}\iiint \rho\, dV \;,\; \oint \vec{B}.d\vec{A} = 0,\; \oint \vec{E}.d\vec{l} = \frac{d\Phi_B}{dt} \text{ and } \oint \vec{B}.d\vec{l} = \mu_0\vec{J} + \mu_0\varepsilon_0\frac{\partial \vec{E}}{\partial t}$$

These four equations explain how electric and magnetic fields generate light waves — allowing nature to connect the Earth, Sun, and galaxies. Electromagnetic (EM) waves are the foundation of almost all modern communication, with different parts of the electromagnetic spectrum used for specific applications like radio waves for broadcasting and satellite signals, microwaves for cell phones and radar, and visible light for fiber optics. These waves carry information by varying their frequency and wavelength, allowing devices to transmit and receive signals over vast distances through the air or vacuum.

5. **Relativity: Nature at High Speeds and Large Scales:** - At cosmic scales, nature's laws change. Einstein's **Theory of Relativity** governs black holes, GPS satellites, and galaxy dynamics.

- **Time Dilation** $t' = \frac{t}{\sqrt{1-\frac{v^2}{c^2}}}$, shows how time itself flows differently at near-light speeds.
- **General Relativity (Einstein's Field Equation)** $G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi G}{c^4}.T_{\mu\nu}$, explains how matter curves space-time, creating gravity. This principle helps us understand black holes, gravitational waves, and the expansion of the universe.



Conclusion: From the smallest particles to the largest galaxies, Nature acts as a perfect scientist, creating, testing, and maintaining universal laws. Humans simply uncover what is already written in the language of mathematics and physics.

Nuclear physics explains the Sun's power and drives nuclear energy and medical imaging (PET scans).

Quantum mechanics governs atoms and underpins modern electronics, lasers, semiconductors, and quantum computers.

Statistical mechanics organizes matter, providing the foundation for thermodynamics, material design, and even predicting climate models.

Classical mechanics rules motion, forming the backbone of engineering, robotics, aerospace, and structural design.

Maxwell's equations carry light and form the basis of modern communication — from radio waves to fiber optics and 5G technology.

Relativity explains space-time and enables technologies like GPS navigation, black hole imaging, and gravitational wave detection.

Truly, nature is the greatest scientist — and we are lifelong students learning its secrets. Every new discovery in science is not a creation of law but a recognition of what Nature has already established.

Of Pressure Cookers and Frozen Compasses: India's Collapse into a Psychological Quagmire: A Perspective through the Prism of Organizational Behaviour and Human Psychology

Prof. Saundarya Biswas
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In a world that prides itself on acceleration of economies of innovation, of individual laurels- India finds itself insured in a paradox of its own making. A nation that aspires to be the vanguard of technological prowess by simultaneously becoming the epicentre of a silent epidemic: psychological burnout, emotional dissonance and pervasive stress. As scholars of Organizational Behaviour (OB) would attest, the crisis we face is not merely personal it is sequential, deeply engrossed in the architecture of our social values, institutional frameworks and cultural outlines.

India's young blood particularly those enrolled in high stakes disciplines like engineering are increasingly falling prey to what psychologists' term it as chronic stress syndrome, fuelled by unrelenting competition and radical definitions of success. In the language of OB, we are viewing a mass erosion of individual morale, intrinsic motivation, and job (or academic) satisfaction, replaced instead by performance anxiety, role ambiguity, and emotional exhaustion

To elucidate this degeneracy, one must first unravel the psychological contract that exists between an individual and social structure in which they function be it the academic institution, the family outline, or an impeccable employer. In India, this contract is often overburdened with hyper-expectations, rarely negotiated with empathy. A study outlines engineering not merely as a learning but as a proxy for parental ambition and validation from society. The result is what OB stalwarts call goal incongruence a systematic misappropriation between individual objectives and objectives imposed upon them.

This discord is more transparent in India's most ubiquitous coaching hotspots like Kota and Delhi's Mukherjee Nagar a centre of excellence and a graveyard for standardized dreams. The student suicides reported each year are not isolated tragedies, they are the manpower cost of a mechanistic, performance centric ecosystem that treat individuals as input variables in a programmed production algorithm rather than simple human beings.

Theories such as Maslow's hierarchy of needs offer a distinctive setup. While India's youth may have their physiological and safety needs met, their needs for belongingness, esteem and self- actualization are frequently suppressed. A student's identity becomes puzzled in metrics percentiles, CGPAs and placement packages- while their emotional intelligence, creativity and resilience are either neglected or deleted. In this landscape, failure is not an impartial- feedback but a fuel for fatalism.

Indian students, in the engineering and technical domain, often face identity patch that stems from the suppression of individual inclination in favour of 'safe' career choices. The long- term dissonance often manifests in mid-career burnout, psychosomatic ailments, or the increasing patterns of abandoning stable careers in pursuit of lost passions.

As engineering students future architects of infrastructure, code, systems and strategy it is crucial to cultivate lessons from Organizational Behaviour. People are not just rational economic agents, they are emotional and social beings. Understanding the dynamics of burnout, motivation, empathy and individualism is not peripheral but integral to both individual attainment and organizational capacity.

"A man who suffers before it is necessary, suffers more than necessary." Seneca.

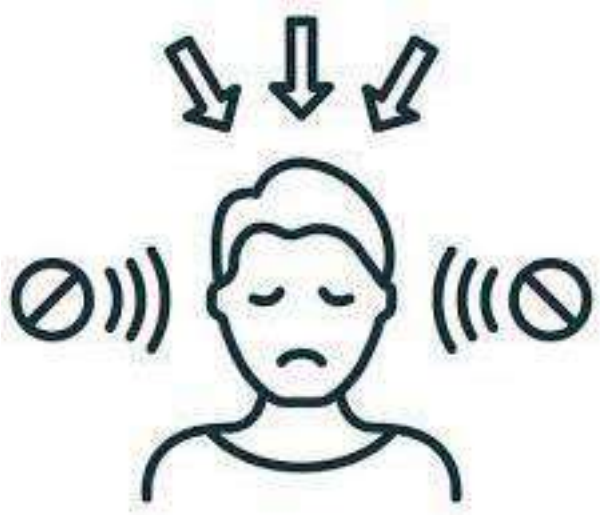
Like, Share, and Struggle: The Impact of Social Media on Mental Health

Tirtha Samanta (CSE/22/021)

In today's digital age, social media has become an important part of our daily life. From early morning until bedtime, many people, especially students and young adults, spend a large part of their time on platforms like Facebook, Instagram, WhatsApp, Twitter, and YouTube.

These platforms offer many benefits such as easy communication, sharing ideas, learning new skills, and staying updated with the latest news. However, along with the good, there are also several negative effectse specially on mental health. One of the most positive aspects of social media is how it helps people stay connected. Whether it is chatting with friends, calling family members, or attending online classes, social media has made communication fast and simple. It also plays an important role in education. Many teachers and students share study materials, videos, and tips through social media groups, which makes learning more flexible and interesting. Social media is also a platform for self-expression and creativity. Many users post their artwork, music, poems, or dance videos. It allows people to be noticed and appreciated for their talents. Small businesses also use social media to reach customers and promote their products. However, the constant use of social media can become a serious problem when it begins to affect mental health. Many students find themselves spending too much time scrolling through reels or posts, leading to addiction. This can reduce concentration, delay studies, disturb sleep, and increase stress levels. Some people begin to feel anxious or sad when comparing their own lives to the seemingly perfect lives of others shown online. Cyberbullying is another major concern.

Social media sometimes becomes a place where users post hurtful comments or spread false information. This can cause emotional harm and lead to feelings of sadness, loneliness, or fear. Fake news also spreads quickly on these platforms, creating confusion and panic. Moreover, overuse of social media often reduces face-to-face communication. People may spend hours on their phones, ignoring their surroundings or the people around them. This weakens real- life relationships and creates a sense of isolation. In conclusion, social media has both positive and negative effects. It helps us stay connected, learn, and develop new perspectives, but it can also affect our mental health if used without limits. The key is to use social media wisely. We must balance our online and offline life, take breaks when needed, and focus on real relationships and responsibilities. When we use social media in a healthy and mindful way, we can enjoy its benefits without allowing it to harm our well-being.



How Artificial Intelligence can help learn and teach English

Subhrangsu Das (CSE/23/115)

Artificial intelligence (AI) has become an essential tool in today's chronically online era, where almost everyone is connected to the internet. AI is now being leveraged to assist with a wide range of tasks, including learning and teaching English or any other language for that matter. Its vast applications make it an incredibly powerful tool for language acquisition. AI, as a learning aid, offers significant advantages over traditional, physical methods of learning a language from scratch. One key benefit is the vastness and adaptability of AI's learning models. Unlike human instructors, who may sometimes rely on personal biases or fixed approaches, AI remains flexible and consistently adjusts to the user's needs. For instance, while a human teacher with advanced knowledge might struggle to simplify complex topics for beginners, AI can adapt effortlessly by starting from the learner's foundational level and progressing at their pace. This flexibility allows AI to cater to a diverse range of learners:

- Complete Beginners: People who are completely new to the language and would start from scratch.
- Intermediate Learners: People who have quite a hold on the language but want to learn more and enhance their existing skills.
- Advanced Learners or Professionals: People who want to domain-specific English, such as corporate communication or industry jargon, which is crucial for individuals looking to excel in their careers.
- Students of Technology: These are the students who have a strong educational background but that need not be in English. Students of Technology are a special category of learners here. These are students who are not that unfamiliar with English but aren't necessarily that smooth with it. This is mainly because the medium of education before the undergraduate

degree can be of any language depending on the state where local languages are also encouraged, due to which a large chunk of people are learning sciences in their native language. But still they need to know the terminologies of their subjects which are mostly in English. So they have a very soft exposure of English. That is what makes them different from other learners. So here AI, having an enormous database of their educational background can integrate their terminologies to different applications of it.

Furthermore, AI's personalization capabilities make learning English more effective and time-efficient. AI acts as a personal assistant, available at any moment, to help learners progress whenever they are ready. It can pinpoint mistakes, provide detailed explanations, and even simulate real-world conversations. This constant availability and feedback loop ensure that learners receive support tailored to their unique challenges and goals.

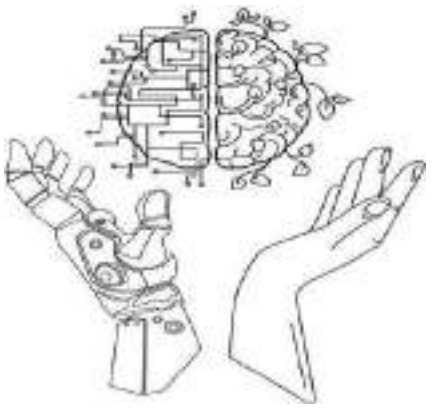
Applications of AI in Learning and Teaching English :

1. Language Learning Apps: Tools like Duolingo, Babbel, and Rosetta Stone leverage AI to create interactive lessons. These platforms adjust difficulty levels based on user performance and offer gamified experiences to keep learners engaged.
2. Chatbots and Conversational Models: AI-driven chatbots (e.g., ChatGPT) simulate natural conversations, helping learners practice English in a realistic setting. These models can mimic native speakers, making them excellent tools for practicing pronunciation and sentence structure.
3. Writing and Grammar Tools: Applications like Grammarly and ProWritingAid use AI to identify errors and suggest improvements in grammar, vocabulary, and style, enhancing both academic and professional English skills.
4. Virtual Tutors: AI-based virtual tutors offer personalized learning plans, tracking progress over time and adapting content to address specific weaknesses.

5. Pronunciation and Listening Practice: AI tools can analyse a user's pronunciation and provide detailed feedback, helping learners achieve clarity and fluency. Societal Pressure English, in our society, is seen as a status, a language of class and highly educated people. So people, most of the times, judge others on the basis of how fluent are they in English. This creates a sense of shame and embarrassment in the people who aren't that fluent. This leads to the phenomenon that people tend to seek less help from people to improve their grasp on the language. AI here can act as the perfect companion for the learner who wouldn't judge but listen to them and correct them politely, encouraging them to learn more and boost their morale.

Conclusion

AI has revolutionized the way English is taught and learned by offering unparalleled flexibility, accessibility, and personalization. Whether it's for academic purposes, career advancement, or everyday communication, AI provides an effective and efficient learning experience tailored to individual needs. Its potential to deliver high-quality education across various proficiency levels ensures that language learning becomes more accessible and enjoyable for everyone.



Future Tech: That Will Blow Your Mind Introduction

Prerana Laha (CSE/22/139)

Introduction :

The rapid evolution of technology continues to reshape industries, economies, and daily life. As we step into a new era, several groundbreaking advancements are poised to redefine the technological landscape. From quantum computing to bioengineering, the next decade will witness innovations that were once confined to science fiction. This article explores the most promising upcoming technologies that will dominate the future.Technology is advancing faster than everwhat seemed impossible a decade ago is now reality. From quantum computers cracking uncrackable codes to AI that learns like humans, the next wave of innovation will redefine careers, lifestyles, and global challenges. This article explores the most promising upcoming technologies that will dominate the future.

1. Quantum Computing : Beyond Classical Limits Quantum computing harnesses the bizarre laws of quantum mechanics to perform calculations at speeds unimaginable for classical computers. While traditional bits process data as 0s or 1s, qubits exploit superposition (existing as 0 and 1 simultaneously) and entanglement (instant correlation between qubits across distances). This allows quantum computers to solve optimization problems, simulate molecular structures for drug discovery, and crack encryption in minutestasks that would take supercomputers millennia. However, major hurdles like quantum decoherence (qubits losing stability) and error-prone operations remain. Companies like IBM and Google are racing to build fault-tolerant quantum systems, with breakthroughs expected by 2030. Once perfected, this technology could redefine finance, cybersecurity, and material scienceushering in a new era of computational power.

2. AI and Autonomous Systems: The Rise of Self-Learning Machines:

Picture this: A car that drives itself through chaotic city streets, a robot that learns to cook by watching YouTube, or an AI that designs life-saving drugs in hours instead of years. This isn't sci-fiit's happening right now. Self-learning AI is transforming our world in real time. Autonomous vehicles now navigate complex urban environments, while systems like ChatGPT demonstrate uncanny human-like reasoning - all through machine learning architectures that teach themselves. The holy grail of Artificial General Intelligence (AGI) looms closer, promising machines that don't just specialize, but truly understand. These breakthroughs raise critical questions about our future. As AI begins diagnosing diseases more accurately than doctors and managing city infrastructure with superhuman efficiency, we must confront the ethical implications. The coming decade will force us to redefine work, responsibility, and even what it means to be intelligent. This isn't hypothetical - it's happening now in labs and products worldwide. The AI revolution won't wait for us to be ready. The only question is whether we'll shape its trajectory or be shaped by it.

3. Rewriting Life and Powering the Future: Where Biology Meets Sustainability: We're entering an era where CRISPR edits genetic diseases away while nuclear fusion harnesses star power on Earth. Lab-grown organs and carbon-eating crops are becoming reality, as synthetic biology merges with clean tech to solve our greatest challenges. Imagine algae farms producing both medicine and clean energy, or buildings wrapped in solar-skinned perovskites generating power. Meat grows in labs, microbes clean oceans, and carbon capture turns pollution into products. This isn't tomorrow's dreamit's today's breakthroughs scaling faster than we imagined. The future belongs to those who see life sciences and sustainability as one revolutionary force, rewriting what's possible for humanity and our planet. The question is no longer "can we do this," but "how fast can we scale it"because the future we've been waiting for is being built today.

4. Metaverse & Spatial Computing: The Next Digital Frontier: The metaverse is transforming how we live, work, and connectmerging physical and digital worlds through spatial computing. Devices like Apple Vision Pro and Meta Quest 3 turn environments into interactive interfaces, while 3D avatars and holographic workspaces redefine collaboration. Entertainment becomes immersive, letting you step inside concerts or sports, and virtual economies thrive with digital assets holding real value. As our online identities evolve beyond profiles into lived experiences, the question isn't if the metaverse will shape our future, but how much of our reality it will enhanceor replace. The next frontier isn't just technology; it's deciding where we belong in this new dimension.

Conclusion:

The future of technology is accelerating at an unprecedented pace. The future belongs to those who understand it. Whether it's programming quantum algorithms, designing AI ethics, or building the metaverse, these technologies will shape your careerand the world. The question isn't if they'll change everything, but how soon. So, stay curious, keep learning, and remember: the next big breakthrough might start with you. The next decade will not just be about adopting new techit will be about shaping it responsibly.

Indian Railways: The Lifeline of a Nation

Argha Pal (EE/23/08)

Introduction:

Indian Railways is one of the world's largest and busiest railway networks. Owned and operated by the Government of India through the Ministry of Railways, it plays a vital role in connecting people and goods across the vast geography of India.

A Brief History: The journey of Indian Railways began on April 16, 1853, when the first passenger train ran between Bombay (now Mumbai) and Thane, covering a distance of 34 kilometres. Since then, Indian Railways has grown into a massive network spanning over 68,000 kilometres, with thousands of trains operating daily.

Structure and Operations:

Indian Railways is divided into 18 zones, each managed by a Zonal Headquarters. It operates more than 12,000 passenger trains and over 7,000 freight trains daily, transporting millions of passengers and tons of goods. From superfast express trains to slow passenger trains, the system caters to people from all walks of life.

Contribution to the Economy: Indian Railways is not just a mode of transport; it is also one of the country's largest employers, providing jobs to over 1.3 million people. It plays a significant role in the Indian economy by facilitating trade and commerce, transporting raw materials, finished goods, agricultural produce, and industrial products across the country.

Modernization and Challenges In recent years, Indian Railways has undertaken several modernization projects. High-speed trains like the Vande Bharat Express, station

redevelopment, electrification of tracks, introduction of bio-toilets, and digital ticketing are some steps toward improving passenger experience and sustainability. However, challenges like safety concerns, delays, overcrowding, and maintenance of aging infrastructure remain.

S**ocial and Cultural Impact:** Beyond transportation, Indian Railways has deep cultural significance. It connects remote villages with big cities, uniting the diverse regions of India. Iconic trains like the Palace on Wheels and Darjeeling Himalayan Railway showcase India's heritage and attract tourists from around the world.

Conclusion: Indian Railways is rightly called the lifeline of India. It not only connects cities and villages but also brings together people, cultures, and economies. As it continues to modernize, Indian Railways aims to provide safer, faster, and more comfortable journeys for the millions who depend on it every day.

Netflix in Your Salad: The Secret Life of DNA Storage

Soumyajit Maity (CSE/22/101)

Imagine this: you're watching Netflix, but not from your phone, laptop, or even a hard drive. Instead, your favorite shows are encoded inside a cell. Not a prison cell, not your mobile phone's SIM card, but a biological cell the very building block of life. Welcome to the world of DNA data storage, where sci-fi turns into scientific fact.

Why DNA is the Storage Revolution We've Been Waiting For

We're living in a data explosion. By 2025, we'll be dealing with over 180 zettabytes of data. For scale, that's more than all the grains of sand on Earth. And our current storage systems? They're clunky, power-hungry, and degrade over time.

Now, imagine this: one gram of DNA can store up to 215 petabytes of information that's 215 million gigabytes. Enough to hold Netflix's entire library, every song on Spotify, Instagram's endless scroll, and all your old memes... with room to spare.

Even better? DNA doesn't need electricity to preserve data and can remain stable for thousands of years as proven by ancient DNA found in fossils.

How It Works: A Simple Breakdown

Storing data in DNA is like learning a new language. Here's the simplified process:

1. Digital to Binary: Your photos, videos, and files are first turned into 1s and 0s.

2. **Binary to DNA Code:** These bits are then translated into combinations of A, T, C, and G the four nucleotides in DNA.

DNA Synthesis: Specialized machines "print" synthetic DNA strands in this coded sequence.

4. Storage: The strands can be dried, frozen, or even inserted into living cells.

5. Reading the Data: When needed, scientists use sequencing technology to read the DNA and convert it back into usable digital files.

Yes, this means an episode of Stranger Things could theoretically be stored in a strawberry.

Not Just Theory __ It's Happening

In 2012, Harvard researchers stored an entire book over 53,000 words in DNA. A few years later, scientists encoded a five-frame GIF of a horse into bacteria. And today, companies like Microsoft are working on DNA storage systems the size of a shoebox that could hold the world's digital footprint.

There's even talk of encrypted data stored inside your own cells. Think James Bond meets bioengineering.

Tomatoes with a Secret Mission?

Here's a wild scenario: modify a tomato so it carries a hidden message encoded in DNA. Ship it as harmless produce. The recipient performs a simple DNA extraction with household items like soap and salt... and out comes the secret.

Sounds like a movie plot? Maybe. But it's also entirely plausible.

Researchers are calling this approach a powerful method for secure, covert data transmission. No USB drives, no networks just salad with secrets.

Why DNA Storage is So Cool

- Tiny Footprint: Store massive amounts of data in a speck of dust.
- No Electricity Needed: Just cool storage no power drain.

- Durability: Stable for thousands of years.
- Biological Storage: Data can live inside cells, plants, or bacteria.
- Hard to Hack: Hidden in living matter, your files are practically invisible.

Right now, there are some hurdles:

- Speed: Reading and writing to DNA is still slow.
- Cost: Synthesizing and sequencing DNA is expensive.
- Error-Prone: Mutations and reading issues require complex error correction. But remember: computers once filled entire rooms and cost a fortune. DNA storage is on a similar path it just needs time to evolve.

- **What's Next? Netflix in a Strawberry? The future is closer than you think. In a few decades, we might:**

- Eat fruits that carry Personal data.
- Store medical records in our own cells.
- Send text books encoded in seeds.
- Bring entire libraries to space in a vial of bacteria.

DNA storage isn't just coming. It's already here just waiting for its big debut. Reflecting on this, a shayari says,

वो जो कभी ख्वाब थे, अब हकीकतों में ढलते हैं,
पत्थरों पे नहीं, अब हवाओं में भी नाम चलते हैं।

कभी जो आसमान से दूर था, अब हथेलियों में समा गया,
वो विज्ञान ही तो है, जो जज़्बातों को भी समझा गया।

हमने सोच को पंख दिए, तो दिल ने उड़ना सीख लिया,
जहाँ आँसू समझ न पाए कोई, वहाँ मशीन ने दर्द लिख लिया।

अब हर कण में कहानी है, हर कली में कोई राज़,
वो तरक़्क़ी नहीं, जैसे वक़्त ने थामा हो दिल का हाथ।

ना कोई चमत्कार था, ना कोई जादूगर आया,
बस इंसान ने इंसान को थोड़ा और समझना चाहा।

So next time you're eating a tomato, ask yourself: what secrets is it hiding?

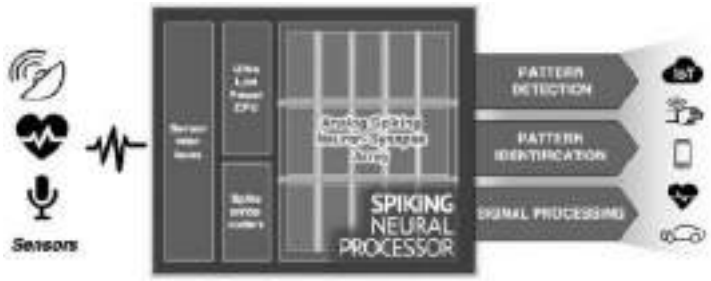
Neuromorphic Computing: Giving Machines a Brain

Arghya Das (CSE/22/040)

"The goal of neuromorphic engineering is to build electronic systems that behave like brains." -- Carver Mead.

We live in a world where artificial intelligence (AI) is touching almost every part of our livesfrom how we shop online to how doctors diagnose disease. It's tempting to think computers have already reached their peak. But what if the way we design machines is still a far cry from how real intelligence works?

That's where **neuromorphic computing** comes ina cutting-edge area of computer science that takes inspiration straight from the human brain.



So, What Exactly Is Neuromorphic Computing?

Think of it this way: traditional computers follow a rigid structure. They process data step- by-step, much like following a recipe. But our brains don't work like that. They're constantly reacting, learning, and adapting through a web of interconnected neurons.

Neuromorphic computing tries to mimic this brain-like behavior. Instead of just crunching numbers, neuromorphic chips are designed to **"think" more like we do**---reacting in real time, learning from experience, and using much less energy to do so.

These chips aren't science fiction. They're already being developed by tech giants like **Intel** (with its Loihi chip) and **IBM** (with TrueNorth). Their designs allow for faster processing, better learning capabilities, and incredibly low power consumption compared to traditional systems.

Why Does It Matter Now?

Modern AI, especially deep learning, is powerfulbut it's energy-hungry. Training something like a large language model can use as much electricity as a small town. That's neither cheap nor sustainable.

Neuromorphic chips, on the other hand, are designed to be efficient from the ground up. They're particularly good at tasks like pattern recognition, real-time decision making, and processing sensory datathe same kinds of things our brains are naturally great at.

- **And they're not just theoretical. Neuromorphic systems are already being tested for:**

Smart sensors that process information locally instead of relying on cloud servers

- **Prosthetic limbs** that respond naturally to nerve signals
- **Autonomous robots** that can learn from their environment

What's Holding It Back?

Like any emerging technology, neuromorphic computing has its hurdles. We still don't fully understand how the brain works, so trying to recreate it in hardware isn't easy. Plus, writing software for these systems requires a whole new way of thinkingit's not just plugging in code from a standard AI library.

But despite these challenges, progress is happening fast. Universities, labs, and companies around the world are pouring resources into the field, hoping to unlock a whole new level of machine intelligence.

Looking Ahead

Imagine a future where computers don't just follow orders, but adapt, learn, and respond to the world around the malmost like living organisms. That's the promise of neuromorphic computing.

For students passionate about technology, neuroscience, or even psychology, this is an exciting time. Whether you're dreaming of building the next AI breakthrough or just curious about how thinking machines might evolve, neuromorphic computing is one of the most fascinating areas to watch and maybe even be a part of.

Resources ::

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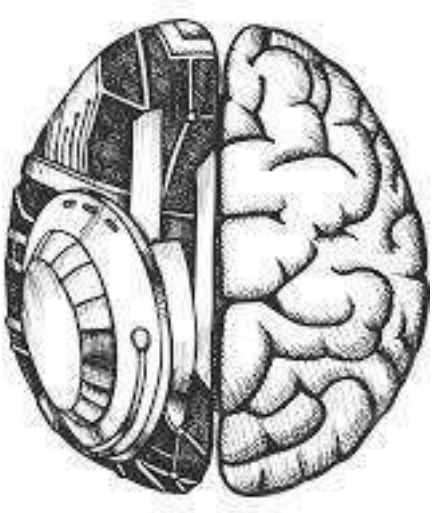

Cybersecurity: Safeguarding the Digital World

Somoshree Pramanik (CSE/22/027)

Cybersecurity is the practice of protecting computer systems, networks, and data from unauthorized access, attacks, and damage. In today's hyperconnected world, individuals, businesses, and governments rely heavily on digital infrastructure, making cybersecurity a critical discipline in computer science and information technology.

At its core, cybersecurity involves identifying vulnerabilities, implementing defence mechanisms, and ensuring the confidentiality, integrity, and availability of data, often referred to as the CIA triad. Professionals in this field use a combination of technologies, processes, and best practices to secure systems against threats like malware, phishing, ransomware, and denial-of-service attacks.

Cybersecurity spans multiple domains, including network security, application security, cloud security, and cryptography. It also involves creating incident response strategies and enforcing security policies to mitigate risks. With the rise of technologies such as IoT, AI, and 5G, the attack surface is expanding, making proactive cybersecurity measures more crucial than ever.

Beyond technology, cybersecurity also emphasizes the importance of human factors and awareness. Many security breaches occur due to weak passwords, social engineering, or human error. Therefore, organizations invest in training programs, awareness campaigns, and regular security audits to create a culture of cyber vigilance. Educating users about safe online behaviour is just as crucial as developing advanced security tools.

Looking ahead, the field of cybersecurity will continue to evolve alongside emerging technologies. Concepts like zero-trust architecture, quantum-resistant encryption, and AI- driven threat detection are shaping the future of digital defence. As cyberattacks grow more sophisticated, cybersecurity professionals will remain at the forefront, protecting sensitive information and ensuring the stability and resilience of the digital ecosystem.

Stardust and Us: How the Universe Lives Inside the Human Body

Sneha Bera (AIML/24/018)

Some truths arrive not with thunder, but in a whisper. Here's one: The universe is not just around you. It's within you. Not metaphorically. Not spiritually. But atom by atom, breath by breath, thought by thoughtyour body is a continuation of the cosmos.

Your Lungs Are Cosmic Filters

Every breath you take carries oxygen atoms forged inside starsnot here on Earth, but in the fiery hearts of suns that lived and died long before our planet was born. Each inhale connects you to something older than Earth. Each exhale sends it back. Your lungs aren't just biological machines. They are filters of ancient air, recycling stardust with every breath.

Galactic Iron Flows Through Your Blood

The iron in your blood was formed in the core of a star that exploded billions of years ago. That explosion was not an ending, but a beginningan origin story for the red that flows through your veins. Your heartbeat is not just survival. It's the pulse of cosmic inheritance.

Your Skeleton Is Built from Celestial Stone

Your bones, strong and silent, are rich in calcium made in dying red giant stars. You are literally standing on the remains of ancient galaxiesjust not beneath your feet, but inside your frame.

Your Brain Is Stardust, Thinking

Your neurons fire with electric signals powered by ionssodium, potassium, calciumeach one cosmic in origin. Your brain isn't just processing the universe. It is the universe, becoming self-aware. As Neil deGrasse Tyson once said: "We are not figuratively, but literally stardust."

DNA: A Code Written by Stars

Your DNAthe master script of your existenceis built from carbon, hydrogen, nitrogen, oxygen, and phosphorus. All of these elements were assembled in the furnace of stars, scattered through supernova winds, gathered on Earth, and finally… written into you. So, your genetic code is not only yours. It's the universe's poem, recited in your skin, your smile, your story.

The Universe Has a PulseAnd It's You

Here's something most people don't know:

About 93% of your body's atoms come from outside Earth

98% of your atoms are replaced every year

You might share atoms with dinosaurs, distant quasarsor even the breath Shakespeare once took So when you feel something deep and ancient inside you, maybe it's not imagination. Maybe it's memory.

Cosmic memory.

Your Body Is a Star Map

Let's visualize this cosmic anatomy:

Body Part	Element	Cosmic Origin
Lungs	Oxygen	Massive stars, supernovae
Blood	Iron	Collapsed stars
Bones	Calcium	Red giant stars
Brain + Nerves	Sodium, Potassium	Stellar fusion
DNA	Carbon, Phosphorus	Interstellar clouds

Infographic idea: Silhouette of a human body with constellations mapped onto internal organs-each one labelled with its stellar source You GlowLiterally Your body emits low levels of biophotonstiny particles of light created by the activity of your cells. Though invisible to the human eye, this glow is real. You shine softly in the dark, powered by the ancient stardust in your cells. The universe never stopped glowing. It simply found a new way to shinethrough you.

Conclusion

The elements that make up the human bodyoxygen, carbon, calcium, iron, and more originated in ancient stars that exploded and scattered their contents across the universe. Over billions of years, these elements became part of planets, air, water, and eventually, living beings. Today, the human body is a living example of that cosmic cycle. From the oxygen in our lungs to the iron in our blood and the calcium in our bones, we carry the physical legacy of stars. Even the DNA that encodes our identity is constructed from atoms born in stellar furnaces. Understanding this connection is not just a scientific realizationit is a reminder of our place in the universe. We are not separate from the cosmos. We are part of itformed by it, sustained by it, and constantly influenced by it. In a very real, scientific sense, the universe lives inside us. And through our ability to think, learn, and explore, it has also gained the ability to reflect on itself. So ask yourself:

If you are made of stars… how will you shine in this world?

Web Application Firewalls (WAF): A Modern Cybersecurity Shield

Surajit Samanta (IT/23/L69)

Introduction

As the attack surface of digital services expands, traditional network-level firewalls are no longer sufficient to protect web-based applications from evolving threats. This paper explores Web Application Firewalls (WAFs) in depth - analyzing their architecture, functionality, and significance in modern cybersecurity ecosystems. The rising adoption of web and mobile applications, APIs, and IoT devices has exposed organizations to an array of complex cyber threats. Web Application Firewalls (WAFs) offer a vital defense mechanism by monitoring, filtering, and blocking malicious HTTP/HTTPS traffic destined for web applications. Unlike traditional firewalls that operate at lower layers of the OSI model, WAFs work at **Layer 7**, focusing on **application-level attacks** like **SQL injections**, **cross-site scripting**, and **HTTP** floods.

What is a WAF?

A WAF is a software or hardware-based security solution that protects HTTP applications by applying a set of predefined rules to detect and mitigate malicious web traffic. Common attack vectors such as **XSS, SQL injection, file inclusion**, and **command injection** are intercepted by WAFs before they reach the target application.

WAFs can be deployed in different environments:

- **Network-based** (hardware appliances)
- **Host-based** (server-integrated software)

Cloud-based (scalable, managed services)

They are particularly vital for industries like finance, e-commerce, healthcare, and social media, where sensitive customer data must be shielded from unauthorized access.

How a WAF Works?

A WAF intercepts and analyzes HTTP/HTTPS requests between a client and a web application. It uses **predefined rules, behavioral analysis, and pattern matching** to detect and block malicious traffic before it reaches the application.

Core Components of WAF Analysis:

- **HTTP Methods:**

- Intercepts and inspects HTTP methods: GET, POST, PUT, DELETE
- Analyzes headers, cookies, and input fields
- Detects injection patterns, malformed requests, or known exploits

Blocks traffic based on signatures, anomaly detection, or machine learning models

Detection Process

When a WAF detects a match with known attack patterns (e.g., suspicious SQL commands, script tags), it blocks the request and optionally notifies administrators. More advanced WAFs use **anomaly detection** and **machine learning** to identify unknown or zero-day threats by observing deviations from normal behavior.

Importance of WAF Security

WAFs are indispensable in defending web applications against modern threats:

- **Protection of Sensitive Data:** Prevents exposure of personal information and credentials.
- **Compliance Assurance:** Assists in meeting standards such as **PCI DSS, HIPAA,** and **GDPR.**
- **Availability and Uptime:** Protects against **DoS/DDoS** attacks, ensuring application availability.

Support for Legacy Applications: Adds a protective layer to outdated or insecure web apps.

As more applications are developed using **third-party, open-source, and legacy code,** WAFs act as a **security buffer** against improperly sanitized input and unpatched vulnerabilities.

Evolution of WAFs

WAFs have undergone several evolutionary stages to adapt to the increasing complexity of web threats:

First Generation:

- Used **blocklists** and **static signatures.**
- Could block known exploits like SQL injection or XSS.
- Struggled with **false positives** and **evasion techniques. Second Generation:**
- Introduced **behavioral heuristics**, session tracking, and anomaly detection.
- Began to learn application behavior over time.

  Could detect logical flaws like conditional bypass attempts.

Third Generation (Modern WAFs):

Employ **machine learning** for real-time behavioral profiling.

Integrate with **threat intelligence platforms** for dynamic rule updates.

Include **DDoS protection, IP reputation filtering, data loss prevention (DLP)**, and **sandboxing** for testing suspicious payloads.

Integration with Other Security Systems

To enhance organizational security posture, WAFs are often deployed alongside other cybersecurity tools:

Intrusion Detection/Prevention Systems (IDS/IPS): Monitor network-level threats.

Next-Generation Firewalls (NGFWs): Offer deeper packet inspection and application-level awareness.

- **Multi-Factor Authentication (MFA):** e.g., Cisco Duo, adds user-level access control.
- **Endpoint Protection:** e.g., Cisco AMP, safeguards host devices against malware.

Threat Intelligence Centers: Share WAF-generated alerts and behavior signatures across the ecosystem.

Comparison with Other Security Tools

While network firewalls handle lower layers, WAF focuses on higher layers where web apps are more vulnerable. WAF is vital for robust application security. While an IPS is signature- based and broad in focus, operating at Layers 3 and 4, a WAF operates at the application layer (Layer 7). A WAF protects web applications by analyzing each HTTP request, and traditional WAFs ensure allowed actions based on security policies. NGFWs are advanced firewalls with integrated IPS and application-layer capabilities.

Conclusion

As cyber threats become more targeted and sophisticated, the role of WAFs in protecting web applications becomes increasingly critical. By focusing on Layer 7, where application vulnerabilities reside, WAFs provide a specialized and adaptive defense mechanism that complements traditional firewalls and intrusion detection tools. Through machine learning, real-time threat intelligence, and sandboxing capabilities, modern WAFs serve as both shields and sentinels in an organization's cybersecurity architecture.

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Will AI end this world

Pulagam Abhimanyu (IT/23/14)

Artificial Intelligence has become the order of the day. Any change of technology or innovation, whenever surfaces, it brings excitement and concern as well. AI in a very short span of time spread over every field from simplest activity to Toughest such as Digital assistance, Medical to Defence activities. Al made the People's life easier with its prompt, accuracy and excellent results.

However, AI reduced human involvement, created a fear in the minds of the People, whether this lead to the end of the role of human beings.

Therefore, it is paramount to dispel these misconceptions surrounding AI. The popular concept is that AI overthrow the humanity, but the reality is, the AI Systems are tools to achieve the objectives with accuracy in less time, as these tools also created by the human beings, Ultimately Controlled by them without any threat to their existence.

Science is always good, it depends on the use or abuse of science, Proper use of AI will improve the well beings of human life with a lot of comforts and cost efficiency. Toughest medical surgeries can be done and save the human lives is the classic example of use of AI.

However the misuse of AI for malicious purposes such as cyberattack or autonomous weapon system may cause destruction, AI systems trained on biased data may exacerbate existing social biased leading to discrimination and injustice.

Considering the all-pros-cons, AI outweigh the risks. It has the potential to revolutionise the industries ranging from healthcare to transportation to finance and entertainment, AI technologies have the capability to address the global challenges such as climate change, diagnosis and disease prevention and resource allocation. To ensure that AI benefits the humanity, it is essential to approach development and deployment responsibility that can be achieved by ethical guidelines and regulations to govern the use of AI. Scientist's policy makers play a pivotal role in achieving this.

In conclusion, the word AI ending the world is a fiction, AI with certain risks it offers tremendous opportunities for innovation and progress. It can make magic, do wonders and improve the quality of human life if we properly utilise this innovation. I am sure that coming era is AI era with huge progress and development in all walks of life.

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AI Demystified: What It Means for You and Me

Rajdeep Bhukta (CSE/22/095)

Nowadays, the whole world revolves around AI it's like the new electricity. The father of Artificial Intelligence is widely considered to be John McCarthy. At first, it was considered just another tool for automation used to solve particular problems or assist in specific tasks. But between 1960 and 1968, the evolution of artificial intelligence systems was halted due to lack of funding. After 1970, work in this field began to progress again. Some people think of AI as the science of making machines, think and act like humans. Initially, AI could be implemented using simple coding structures, such as multiple if-else loops to perform tasks. Then scientists began to study how the human brain functions. This led to a broad exploration of how human brain input and output work, in an attempt to replicate it and create artificial intelligence. The conclusion drawn was that it's all about neural networks. A neural network is nothing but a collection of neurons that are interconnected with one another. In today's world, we interact with properly evolved intelligence. The most mysterious thing about AI is that no one can predict what comes next. Think about the USA and India both are countries, but the USA is called a developed nation, while India is a developing nation.

There's a difference between a developed and developing nation. In the same way, AI is in its developing phase, not fully developed. Still, we have come a long way in the development of AI. Someone who is new to the AI world might think of it as just robots. But even before AI, we used calculators both require input to perform certain tasks. By the end of 2022, we were introduced to ChatGPT, Gemini, and many other tools, which are known as Generative AI. The popularity of generative AI started from there. Now, in our everyday life, we use GPT tools for almost every kind of work. They help students and office workers alike. On the other hand, there's a field called Artificial Intelligent Agents, like Hyperwrite , Replit

etc., which are used daily. Now, think about Amazon Alexa. If someone says, "Hey Alexa, I feel hot, please turn on the AC," it turns the AC on. Another popular example is Apple's Siri if you say, "Please order a pizza for me," it does so in a few minutes. This is all made possible because of Big Data. Nowadays, people's privacy and data are cheaper than food. Our everyday mobile and desktop applications know more about us how we work, how we think, how we look, and everything. Consider all this data as the "food" of Big Data, which fuels AI. AI is no longer just a futuristic dream it's part of our present reality. As it continues to grow and improve, our responsibility is to use it wisely and understand its potential. The journey of AI has just begun, and the future holds endless possibilities. We've come a long way in the evolution from asking "What is AI?" to wondering "Is AI taking our jobs?"

The Role of AI in Our Daily Lives

Mahan Maity (AIML/24/026)

In the 21st century, artificial intelligence (AI) is no longer fiction. It's an everyday reality that is quietly-yet forcefully-changing the way we live, work, learn, and interact. From smart phones to smart homes, AI has become intricately part of our daily lives, unbeknownst to us.

What is AI Truly?

Artificial Intelligence is computer systems or machines that are programmed to simulate human intelligence. This Encompasses learning, problem-solving, comprehension of language, and making decisions. Although AI was once Limited to science-fiction robots, nowadays, it's everywhere-from smart assistants like Alexa and Siri to Tools like ChatGPT, which can write, explain, and generate content. Daily Life: Where We Use AI Without Realizing It

1. Smartphones & Social:

Media When you unlock your phone with your face, receive personalized content on Instagram or TikTok , or Ask Google Assistant a question-AI is at work.

2. Shopping & Recommendations:

Amazon or Flipkart reveals what you were searching for through AI. Netflix, Spotify, and YouTube similarly do it for video and audio content.

3. Health & Fitness:

Smartwatches such as smartwatches monitor sleep, heart rate, and exercise through AI, while hospitals utilize AI to detect diseases early.

4. Education & Learning:

Apps like Duolingo and tools like ChatGPT personalize education and help students learn faster.

5. Transportation & Maps:

Google Maps leverages AI to forecast traffic, recommend more efficient routes, and provide arrival time estimates.

AI at Work AI is transforming work in technology, finance, and services. Virtual assistants, AI bots, and automation tools perform mundane tasks. This has raised fears of job loss, necessitating re-skilling.

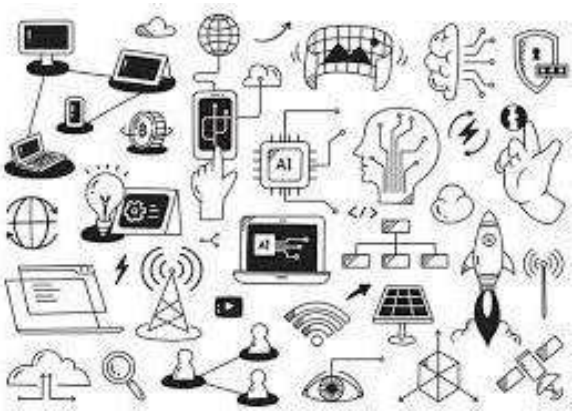
The Flip Side: Risks & Challenges

- Privacy: AI systems gather a lot of data, evoking surveillance fears.
- Bias: AI can make unequal decisions when trained on unequal data.
- Dependency: Excessive dependence can decrease critical thinking and social abilities.

Looking Ahead

AI is a revolution. Ethical usage, education, and equitable accessibility can make AI a good force.

Conclusion: Artificial Intelligence is molding the future and present. From communication to education and beyond, it's evident. Staying updated and applying it wisely is necessary.



The Résumé Rejected

Avik Mitra (IT/23/12)

The Ganga ghat shimmered under the golden haze of the setting sun. The warm, earthy scent of the river mixed with the faint aroma of marigold flowers from the nearby stalls. I sat beside her, our fingers loosely intertwined, my heart pounding louder than the chatter around us.

She turned to me, her eyes glossy with worry, as if they carried a thousand unspoken fears. "What if tomorrow doesn't go well?" Her voice trembled, as soft as the gentle breeze brushing past us.

I swallowed the knot in my throat, forcing a smile. "It will," I said, by holding her hand. "It's Google. I've done everythingcountless DSA problems, built multiple full-stack web development projects, internships, and perfected my résumé. This time, I'm ready."

That night, sleep was a distant stranger. My mind raced through every algorithm, every answer I could give, and every scenario. I imagined walking into the hall, shaking hands, nodding confidently, and being selected at my dream company. Or so I believed.

Morning came with a nervous flutter. The crisp shirt felt like armor, but inside, my stomach churned. The placement hall buzzed with hopeful whispers and worried faces. Round after round, I answered with precisionuntil the last one.
Then came silence.

The rejection email arrived like a cold slap, the buzz of my phone cutting through my fragile hope. I stared at the screen, the words blurring. "We regret to inform you…" The same phone that once held my dreams now held my defeat.

I walked back alone to my hostel, the evening air heavy and thick. Around me, laughter echoed from groups celebrating their success. My ceiling above was blank and unchanging, but inside, questions slammed like thunder: Was I not enough?

Days bled into one another until her father's call shattered the quiet. His voice was stern but laced with a sharp edge of concern. "Two years. Either become something or forget her."

That night, I dug out my old diary from a dusty shelf. The pages smelled of aged paper and forgotten dreamssketches, half-finished scripts, and childish scribbles. My dream had never been a corporate job. It was to be seen, to be heard, to act and move hearts.
Yet, I sat there, crushed by doubt, with no clear path.

She found me in that quiet corner of the world, broken and barely breathing.
"You're not meant to be ordinary," she said softly, her hand warm against mine. "If Google can't see your light, the world still can. Show them. Show me."

Her words weren't a fix but a flicker in the dark.

I started smallrecording a silly skit on my phone, editing with free apps, and uploading with shaky hands. One like. Two views. A week later, ten. Still, I kept at it.
People laughed. Not with me, but at me.

"Engineer turned joker."

"Still jobless?" was the average comment on my reels and videos .

Each laugh felt like a stone, but I carried them all.

I made my life my scripthostel struggles, Bengali middle-class realities, heartbreaks, and hopes. And slowly, the world started to listen. Views climbed to thousands, then lakhs. My name popped up on trending lists. Brands called. Interviews followed. Those who once mocked now shared and praised.

Two years later, I stood at the same ghat, holding the same hand. This time, pride warmed my chest like the sun above. I booked my parents their first flight tickets and took them to Mumbai, where a giant billboard smiled back at memy face, once rejected, now celebrated.

She rested her head on my shoulder, the Ganga flowing beside us like the past quietly washing away beside us.

"Baba said," she whispered, "he's proud. Said he couldn't have asked for a better son-in- law."

Tears welled upnot from pain, but from every night I almost gave up, every silent prayer my mother whispered.

I looked at her, voice steady. "I couldn't crack Google, but now everyone searches me on Google."

She smiled, and in that moment, I knew rejection isn't an end; it's life giving you a better story.

The résumé was rejected. But my story? That got a standing ovation.

The Weightless Way This is not written for comfort; it is written for awakening

Prof. Washim Akram
Assistant Professor, Department of Computer Science and Engineering

In the quiet spaces of our minds, beyond the relentless hum of assignments, deadlines, and ambitions, there lies a whisper, a subtle yearning for peace. But in this age of ceaseless striving, that whisper often gets drowned out by the louder echoes of expectations. We, the students of today, have been taught that success is found in degrees, placements, and packages. We measure progress by how far we stand ahead in a race that constantly moves the goalposts. But at what cost? Sleepless nights, anxious thoughts, hollow smiles, all traded silently for a promised future, as though happiness is something earned, a distant reward, not a present necessity.

The paradox is cruel: to win the world, we often lose ourselves.
Philosophy, the ancient compass of the soul, beckons us to pause. Socrates once said, "An unexamined life is not worth living." Perhaps, in our world, we must now ask: What is the worth of a goal that demands we sacrifice our joy, our health, our peace? "He who has a why to live can bear almost any how," said Nietzsche. But do we even know our why? Or are we simply moving propelled by fear, comparison, and external expectation? We become machines chasing achievements, mistaking productivity for purpose, and progress for peace. Osho once wrote, "The mind is a beautiful servant, but a dangerous master." And today, it rules us.

It rules with anxiety disguised as ambition. With exhaustion disguised as discipline. With isolation disguised as independence.

But beneath the storm of striving, there lies a space untouched, a sanctuary that cannot be breached. A place where no rank, no rejection, no recognition can enter. To find this space is not to withdraw from life, but to finally meet it.

"Man is a mystery," said Dostoevsky, "It needs to be unraveled." Yet in the pressure to conform, we wrap ourselves in borrowed identities, achiever, winner, success, while our true selves remain buried beneath.
Rumi, the eternal mystic, asks:

"Why do you stay in prison, when the door is so wide open?"

The Buddha spoke of dukkha, the inevitable suffering of life. But he also spoke of nirvana, a state beyond suffering, not in some distant paradise, but here and now, through mindfulness, compassion, and detachment. Not detachment from dreams, but from the toxic idea that we are only worthy if we "make it big." This is the forgotten power of awareness, we cannot avoid all pain, but we can choose how we hold it, how we respond, how we transform it. In that choice lies peace.

We must return to the quiet places. We must reclaim the sacred pause.

Mental peace is not the absence of ambition; it is the presence of balance. It is the art of gentle striving, where we work not to impress, but to express; not to prove, but to live. It is knowing that joy isn't a destination, but a way of walking.

Let this be our quiet rebellion: To breathe.

To rest without guilt.

To choose presence over pressure. To seek therapy without shame.

To dance without a reason. To cry without apology.

To be without performance.

We must relearn that our minds are not factories, they are gardens. And peace is the flower that blooms only when we stop poisoning the soil with self-doubt and perfectionism. Yes, strive. Yes, dream. But not at the cost of your soul. Not by trading your now for a tomorrow that may never feel enough. Because medals may gather dust. Applause may fade. But peace? Peace lives on, as the truest wealth one can ever hold. "You were born with wings. Why prefer to crawl through life?" **- Rumi**

THE GEN Z HUSTLE

Sagnik Ghosh, (CSE/24/036)

Another morning, another battle with the alarm clock. Argue with your brain about whether 10 more minutes of sleep is worth risking attendance. Regret sleeping at 2 AM after “just one episode” of Squid Game. That’s how most of our days begin – not with meditation but with the daily battle against the alarm clock.

We’re the Gen Z generation, caught somewhere between reels and reality, dreams and deadlines, Netflix and next submissions. Raised on Doraemon and emotionally supported by

Arijit Singh. Welcome to the hustle.

If you're a Gen Z college student like me in India right now, chances are your life is a mix of assignments, side hustles, reels, sip on chai or coffee, and existential dread. From 9 AM classes to 2 AM overthinking, the Gen Z student’s routine is equal parts of ambition and anxiety. We are studying, learning new skills online, helping with college events, and trying to stay active on social media too. This lifestyle, where we are always working or thinking about work, is called the “Gen Z hustle.” As students, we are under a lot of pressure. Parents want us to do well in exams, society wants us to get good jobs, and social media shows us people of our age already “achieving big things”. It feels like we must do everything—study, earn, create, and succeed—by the age of 20. And if we don’t, we feel like we are falling behind. In the movie 3 Idiots, the character Rancho says: "Kaabil bano, kaamyabi jhak maar ke peeche aayegi". It means we should focus on learning, and success will come. But in real life, we’re so busy chasing success, we sometimes forget to enjoy learning. Many of us feel like we are not doing enough. Even when we are tired, we keep working because we are scared someone else will get ahead of us. We compare ourselves with friends and classmates,

even though everyone has a different journey. Sometimes we don't even know what we want to do in life, but we keep moving anyway—because stopping feels scary. Still, many of us hustle because we have dreams. Some want to make their families proud. Others want to be independent and break out of old systems. We may be tired, but we try, because we believe in our future. The truth is, it's okay to rest. It's okay to not have everything figured out. Not every day has to be productive. We are still young, still learning, and that's enough.

So if you're feeling tired, take a break. Talk to a friend. Watch your favourite show, laugh at memes, and get some sleep. Life is not a race—it's a journey. And even if your path is messy, it's still yours. You are allowed to go at your own pace. So keep going, but don't forget to live. Your worth is not measured by your to-do list.

And when it all feels too much, just keep your hand on your heart and say: "All is well". Because sometimes, that's all we need to keep going

Harnessing the Sun's Power: The Solar Chimney Power Plant (SCPP)

Anjan Bhunia (ME/21/12)

Introduction

As the globe transitions to renewable energy, new technologies emerge to harness the sun's power more effectively. One such proposal is the Solar Chimney Power Plant (SCPP), a creative and environmentally friendly approach to generate power from solar radiation and natural airflow. Though still in its early phases, the SCPP represents a viable alternative for large-scale renewable energy production, particularly in bright, dry locations.

How Do Solar Chimney Power Plants Work?

The Solar Chimney Power Plant works on a simple yet clever principle:

1. Solar collector (greenhouse effect) A big, circular glass or clear plastic canopy covers the ground and heats the air underneath it. The sun's rays travel through the canopy, warming the surface, which then warms the trapped air.
2. The collector features a large chimney (updraft tower) in the middle. Hot air rises (due to convection) and rushes up the chimney at rapid speed.
3. Wind Turbines (Energy Conversion): The flowing air powers turbines situated at the foot of the chimney, creating energy via a generator.

Unlike photovoltaic (PV) solar panels, which converts sunlight directly into electricity, a SCPP generates power through thermal energy and airflow, resulting in a mix of solar thermal and wind energy technologies.

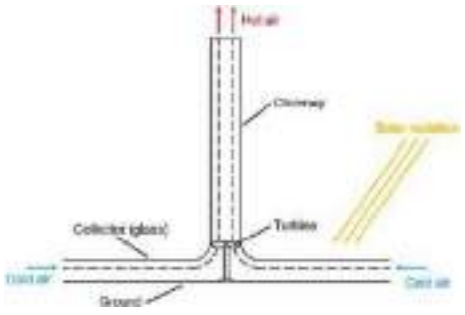


Figure: Schematic Diagram of Solar Chimney Power Plant (SCPP) [1]

Advantages of Solar Chimney Power Plants

1. SCPPs use solar energy and emit no greenhouse gases during operation, making them renewable and clean. **2. Low Maintenance** - SCPPs have fewer moving components than traditional power plants, requiring less maintenance after construction. **3. Operates 24/7 -** The collector's heat-retaining ground allows for continuous power generation after sunset. **4. Suitable for Arid Regions:** Ideal for deserts or locations with high solar irradiation, where typical agricultural or land uses are limited. SCPPs are ideal for drought-prone locations as they do not require water for cooling, unlike other power plants such as solar thermal systems.

Challenges and Limitations

Despite their promise, SCPPs confront a few challenges: • Construction of a huge chimney (over 1,000 meters tall) and collection area demands major expenditure. • Land Requirements: SCPPs require large open expanses, which may not be viable in heavily populated areas. • Lower efficiency. Compared to PV panels, current SCPP designs have poorer energy conversion efficiency than conventional solar panels. • Weather conditions can affect power output.

Real-World Applications and Future Prospects

The first operating SCPP was a 50 kW pilot plant in Manzanares, Spain, from 1982 until 1989, demonstrating the concept's practicality. Since then, larger projects have been suggested, including a 200-MW facility in Australia (which is currently being planned).

Researchers are investigating techniques to increase efficiency, such as: • Hybrid Systems combine SCPPs with PV panels or thermal storage for improved performance. • Floating solar chimneys can reduce construction costs by adopting lighter materials or buoyant designs. • Improved Turbine Technology: Creating more efficient turbines to enhance energy extraction from airflow.

Conclusion The Solar Chimney Power Plant is an innovative renewable energy concept with enormous potential. While it confronts economic and technological obstacles today, advances in materials and engineering may make SCPPs a feasible large-scale energy option in the future. As the world explores sustainable alternatives to fossil fuels, new concepts like the SCPP remind us that nature's power, when carefully harnessed, has the potential to light up our future.

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The Value of Failure in Achieving Success

Rohan Maity (ME/24/05)

Introduction:

Failure a word that many of us fear is often seen as the opposite of success. But in reality, failure is not the end; it is the beginning of learning. Every successful person has faced failure at some point in life. It is through these experiences that they grow stronger, wiser, and more determined. Failure teaches lessons that success simply cannot.

1. Failure Teaches Valuable Lessons:

Failure helps us understand our weaknesses and mistakes. Each time we fail, we learn what doesn't work and how to improve. These lessons become the foundation for future success. Without failure, we would never know the true value of persistence and effort.

2. Failure Builds Resilience:

Facing failure makes us mentally stronger. It teaches us to face challenges with courage and determination. The ability to rise again after falling is what separates successful people from those who give up. Resilience gained through failure prepares us to handle bigger challenges in life.

3. Failure Inspires Innovation:

Sometimes, when our plans don't work, we are forced to think creatively and find new ways to achieve our goals. Many great discoveries and inventions were born out of failed experiments. Failure pushes us to explore new ideas and find better solutions.

4. Failure Strengthens Character:

Failure teaches humility and patience. It reminds us that success is not instant but earned through hard work. People who experience failure become more understanding, mature, and balanced in life. It shapes their character and gives them a deeper appreciation for success.

5. Famous Examples of Learning from Failure:

Many great personalities have turned failure into success. Thomas Edison failed thousands of times before inventing the light bulb. Similarly, Walt Disney was once told he lacked creativity, and J.K. Rowling faced several rejections before publishing Harry Potter. Their stories show that failure is only temporary if one keeps trying.

Conclusion:

In the end, failure is not something to be feared it is a powerful stepping stone toward success. It teaches us lessons, builds our strength, and shapes our future. Every failure brings us closer to our goals. So, instead of avoiding failure, we should embrace it, learn from it, and rise stronger each time because every great success story begins with failure.

The Borrowed Suit

Suvajit Mondal, (IT/23/37)

FADE IN: INT. SMALL APARTMENT – NIGHT (ALEX, an unprepared and slightly clueless young man, is pacing around his apartment in panic. His roommate, CHRIS, is lounging on the couch, eating chips.)

ALEX: Chris, you gotta help me. I have a date in an hour, and I have nothing to wear!

CHRIS: (Distracted) Wear what you always wear.

ALEX: She said, and I quote, "Dress to impress." Do I look impressive in a hoodie and jeans?

CHRIS: (Pauses, examines Alex) You look... comfortable.

ALEX: Exactly! I need something sharp, like a suit.

CHRIS: I have a suit!

ALEX: (Surprised) Since when do you own a suit?

CHRIS: Since my cousin's wedding. Wore it once, never again. It's in the closet. (Alex rushes to the closet, pulls out a sleek-looking suit, and starts putting it on.)

ALEX: This is perfect! You're a lifesaver.

CHRIS: Yeah, yeah. Just be careful. It's... uh... delicate. (Alex struggles with the pants, pulling them up forcefully. Suddenly, a loud RIP echoes in the room. They both freeze.)

ALEX: (Panicked) No-no-no. What was that?

CHRIS: (Snickering) That would be the delicate part. (Alex turns to the mirror and sees a massive tear right on the back of the pants.)

ALEX: What do I do?!

CHRIS: I dunno, wear black boxers and own it?

ALEX: (Looking horrified) I can't go on a date with my underwear on display!

CHRIS: She did say to "impress." Maybe she meant personality? (Alex groans, looking around in desperation.)

ALEX: Duct tape! (Alex grabs a roll of duct tape and awkwardly starts taping the tear. It looks terrible.)

CHRIS: Oh yeah. That totally looks natural.

ALEX: (Sighs) Plan B?

CHRIS: Panic and cancel?

ALEX: No! I need another suit.

CHRIS: Your neighbor, Mr. Thompson, wears suits all the time. Maybe he has one? INT. HALLWAY - NIGHT (Alex knocks frantically on MR. THOMPSON'S door. The elderly gentleman opens it.)

MR. THOMPSON: Ah, Alex! Need some sugar?

ALEX: Uh, actually, I need a suit. Urgent date situation.

MR. THOMPSON: Say no more! (Grins, disappears inside, returns with an old-school, bright green plaid suit) This was my lucky date suit back in '72! (Alex stares in horror but has no choice. Cut to Alex in the oversized, ridiculous suit.) INT. RESTAURANT - NIGHT (Alex sits nervously. His date, LISA, arrives and stops in her tracks, taking in his outfit.)

LISA: (Smiling) Wow. That's... bold.

ALEX: (Embarrassed) Funny story, actually.

LISA: (Laughs) I love a good story. Tell me over dinner. (Alex sighs in relief, realizing personality might actually be the key after all.) FADE OUT.

THE END

Dream Breakers

Sayantani Khanra, (CSE/24/133)

The Corner Café Every evening, Maya and Rohan met at the corner café, a spot where dreams were shared and shattered over steaming cups of coffee. Maya was an aspiring artist, always chasing her muse. Rohan, on the other hand, was a realist, grounded in the practicalities of life. They were unlikely friends, yet their conversations flowed like a river, sometimes gentle, sometimes turbulent.

Maya would pour her heart out about her art, her passions, and her fears. Rohan would listen intently, offering words of caution, reminding her of the harsh realities of the world. But amidst the skepticism, Maya found solace. Rohan's brutal honesty helped her confront her doubts, refine her ideas, and push her boundaries.

One day, Maya's art gained recognition, and her dreams began to take shape. Rohan was there, smiling, yet a tinge of melancholy in his eyes. "You did it," he said, "but remember, success is fleeting." Maya smiled, knowing that Rohan's words were not about dampening her spirit but about keeping her feet on the ground.

Their friendship was a delicate balance of dreams and reality. Maya's optimism and Rohan's pragmatism intertwined, making each other stronger. The corner café remained their sanctuary, a place where dreams were nurtured and tested, where the line between dreamers and dream breakers blurred.

In this piece, the characters of Maya and Rohan explore the dynamicbetween dreamers and those who might challenge or ground their aspirations. The story highlights the value of balanced perspectives in achieving one's goals.

Moral: "Balanced perspectives, blending dreams and reality, can lead to stronger, more grounded aspirations and ultimately, greater success."

The Diary

Rimita Bag (CSE/24/109)

Life can be cruel sometimestwisted in ways that feel unbearable. And his life was no exception.

There was a boy, just 15 years old, trapped in a silent war with himself. Every day played on repeat: school, home, loneliness, repeat. No friends. No one to talk to. Just the cold routine and the quiet ache of isolation.

One afternoon, while wandering the empty halls of school, he stumbled upon something unusualan old diary, oddly shelved backward in the library. Its pages were blank. Not a name, not a note. Just silence between the lines. But something about it called to him, like it had been waiting.

He brought it home.

That night, he began to write. At first, it was small thingsfragments of feelings. But soon, he poured his entire heart into it. He wrote about the bullying, the neglect, and the loneliness. His pain flowed onto the pages like water from a broken dam.

And something strange happened.

As the ink disappeared from the paper, a weight lifted from his chest. It was as if the diary was absorbing his sorrow listening, understanding, and quietly healing him.

Night after night, he bled truth into that diary. It became his secret friend, his confidant. For the first time, he wasn't alone. But then, one morning, it was gone.

He searched every room, every drawer, and every shadow. Nothing. The diary had vanished.

He was devastated. Lost. The one thing that truly understood him had disappeared without a trace. It broke him in ways he didn't expect. He had wrapped so much of himself in that diary, forgotten that it was only ever a part of his healing not the whole of it.

In his pain, he nearly unravelled again. But slowly, quietly, he remembered something: he was already healing. The diary had helped him open wounds he had long buriedbut he had done the hard part. He had faced the truth.

Sometimes, what heals us won't stay forever. Some things are just chapters, not conclusions. And when they leave, it doesn't mean the journey endsit just changes. So he took a deep breath.

And he kept writingthis time, on new pages.

ANVIL OF DAYS

Srawan Singh Rajput, (AIML/23/16)

A man is like a mountain, shaped by wind and years. He was once a boy, soft and full of dreams, but life changed him through struggles and storms, and the warmth of happy days that didn't last long. When he was young, his heart was like a small flame, glowing bright in hands that didn't yet know fear.

He chased big dreams with bare feet, and learned painful lessons when he fell. Life became like a hot fire and heavy hammer, pushing him to be strong in quiet ways.

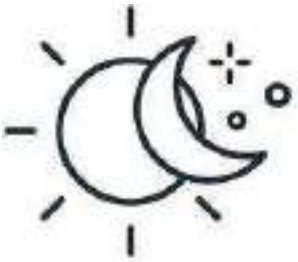
He smiled even when things were hard, and carried heavy burdens without complaint. His heart turned into a wise guide, helping him through hard times he couldn't see.

He found hope in the eyes of his children, and slowly let go of his old fears.

He became like a tree that never asked for rewards, but still gave fruit and shade to others.

His roots were deep in hard work and love, and he stayed strong through every storm. The lines on his face tell stories of choices, His scars show the strength he earned.

Time didn't just take things from him It taught him lessons written on his skin. And when his time comes to rest, he won't need praise or noise. He'll leave behind quiet strength, to help others grow from what he gave.



Daughter of The Sun

Disha Dutta, (ECE/22/78)

Tell your daughter how you love your body. Tell her how she must love hers.
Tell her to be proud of every part of herself
from tiger stripes to soft thighs. Whether there is a little of her or a lot, Whether freckles cover her face or not, Whether her curves are plentiful or slim,
Whether her hair is thick, curly, straight, long, or short.
Tell her how she inherited
her ancestors' souls in her smile, That her eyes carry countries that breathed life into history,
That the swing of her hips does not determine her destiny. Girl,
You were born with a fire inside you,
And this world will be determined to stamp it out. You'll see it in the mirror when you rise for yourself and are told, "It isn't ladylike to raise your voice."
You will hear it when you wear something that hugs your body and feel the uncomfortable sensation of being stripped naked
by the eyes of men who call you names you are still too young to understand.
You will know it when a man tries to use his strength to have his way with you the first time, and you need to use your fists, teeth, or legs to get him off.
You will understand it when you see your mother's eyes filled with terror
because you are an hour later than you said you would be home.
But you must never let them take those flames from within your soul.
Instead, you must burn brighter than ever, because you are a daughter of the Sun,
and you belong only to yourself, not to this world. Tell her never to listen when bodies are critiqued. Tell her every woman's body is beautiful,
because every woman's soul is unique.
And her fire, her voice, her worth unrepeatable. So, tell her not just to listen to love,
but to be it. Boldly. Fiercely. Forever.

Seven Summers

Nabanita Mondal, (CSE/24/132)

We were still under the same roof
breathing, surviving,
striving in our own quiet ways. But the three inches between us turned into miles of silence.
We became you and I. No longer us.
We didn't notice the change
until the night everything cracked open, and I hated you
for being you.
That night,
a wave came
not water, but war.
A war that rose between us, crashing through what we had built, leaving a scar so deep
even time refused to heal it. But was it really the wave? Or did we let go first?
Too tired to hold on,
too distracted to look back.
We stopped seeing each other busy fighting our own battles, exhausted souls
trying to survive. We blamed fate:
the ailing father, the helpless mother. But maybe,
it was our silence,
the way our dreams lay in pieces
wings stained, love quietly dying. The war ended,
but we didn't win.
No one did.
The bees still danced, the birds still sang.
The world went on
just not us.

Seven winters passed.
Seven cold springs.
While I no, we
tried to mend the ruined canvas, tried to fix something
already gone.
Nothing truly changed, except the seven flowers that once bloomed for us
they withered.
We drifted.
And then, one night,
we stood before that wave again
the same silence, the same ache.
We saw it this time
how the bullets rained, how the canvas turned red, how we let go
while pretending to fight. The war had ended,
but not before it took from us seven summers
we could have grown into. Seven chances to bloom. The world survived.
But we did not.

Nuclear Battery Applications in Electronics and Electric Vehicles

Sayan Paul (EE/22/07)

Imagine a battery that could last for decades without needing to be charged or replaced. It soundslike science fiction, but nuclear batteries—also known as atomic batteries or Radioisotope thermoelectric generators (RTGs)—are bringing us closer to that reality. These power sources convert the energy released from the natural decay of radioactive materials into electricity. And unlike large-scale nuclear reactors, nuclear batteries are compact, self-contained, and designed to be safe and low-maintenance. Their ability to deliver steady, long-lasting power makes them a game changer in areas where regular batteries just don't cut it.

The story of nuclear batteries actually begins over a century ago. In 1913, British physicist Henry Moseley built the first experimental device that used radioactive decay to produce electricity. His work wasn't immediately commercialized, but it laid the foundation for the nuclear batteries we're exploring today. Fast forward to the Cold War era—the 1950s—when the U.S. and the Soviet Union began pushing the boundaries of nuclear technology. In 1961, the U.S. launched the Transit 4A satellite, the first spacecraft powered by a nuclear battery. That moment marked the beginning of real-world nuclear battery use. Since then, these devices have powered space missions like Voyager, Cassini, and the Curiosity and Perseverance rovers on Mars—missions where solar panels would struggle to survive.

One of the biggest reasons nuclear batteries are so attractive is their lifespan. While traditional lithium-ion batteries degrade and need charging every few hours or days, nuclear batteries can run continuously for 10 to even 50 years depending on the isotope used. That's why they've been used in things like heart pacemakers in the past—devices where changing a battery is not just inconvenient but also risky. They're also perfect for powering instruments in extreme environments: deep-sea exploration equipment, Arctic monitoring stations, or remote space probes—places where swapping a battery simply isn't an option.

Now, with technology shrinking and the world becoming increasingly connected, there's a renewed push for smaller, smarter, and longer-lasting batteries. Think about the rise of smartwatches, implantable health devices, and the Internet of Things (IoT). All these gadgets need power sources that last, especially in hard-to-reach places. This is where beta-voltaic batteries, a type of nuclear battery, shine. They work kind of like solar panels—except instead of capturing sunlight, they collect energy from tiny particles (called beta particles) released by radioactive decay. Researchers are now developing these micro nuclear batteries to power everything from wearable tech and medical implants to sensors and drones.

The potential gets even more exciting when we talk about electric vehicles. Right now, EVs. rely on lithium-ion batteries, which take hours to charge and start to lose their punch over time. Imagine instead a car that runs for years without needing to be plugged in. That's what nuclear battery technology could make possible. It would eliminate range anxiety and reduce the need for an extensive charging infrastructure, especially in remote areas. Plus, because nuclear batteries have a much higher energy density, they could make EVs. lighter, more efficient, and possibly cheaper in the long run.

But let's be realistic—this kind of widespread use doesn't come without challenges. Safety is the first concern. Even though modern nuclear batteries are designed to be safe, with secure encapsulation to prevent radiation leaks, the idea of radioactive materials in everyday devices still makes people uneasy. Public acceptance and strict safety regulations will be essential. There's also the question of cost. Materials like tritium, strontium-90, or americium-241 aren't cheap, and handling them safely adds to the expense. That's why, for now, nuclear batteries are mostly used in critical applications—space missions, military gear, or high-end medical tech—where longevity and reliability matter most.

Still, innovation is pushing forward. One of the most exciting developments is the Nano Diamond Battery (NDB) being created by NDB, Inc. These batteries use layers of lab-grown diamonds to safely encase radioactive material. They're not only super efficient but also use recycled nuclear waste—turning something hazardous into a sustainable energy source. Better yet, these batteries are scalable. They could power something as small as a hearing aid or as large as an electric vehicle—or even a satellite. Nuclear batteries for powering long-term surveillance equipment or autonomous vehicles in the field. Emergency infrastructure like tsunami warning buoys or earthquake sensors could use to operate for decades without maintenance. And in the not-so-distant future, space tourism or even lunar habitats might rely on nuclear batteries to keep life support systems and electronics running.

At the end, Nuclear batteries are no longer just science experiments or tools for space agencies. They're quickly becoming a serious contender in the race for better, longer-lasting energy solutions here on Earth. Of course, there are still hurdles to overcome—especially when it comes to safety, cost, and public understanding. But with smart innovation, responsible regulation, and open communication, nuclear batteries could revolutionize how we power everything from tiny gadgets to giant vehicles. The future of energy might just lie in the atoms quietly humming away inside these extraordinary little powerhouses.

Myth of the "Strong Women"

Shrestha Chatterjee (CSE/24/041)

Just for a moment, I don't want to be strong.
I want to cry loud and hard.
I want a shoulder to lean on.

They clap for how strong I am as a woman.
But just for once, I don't want to be strong.
They admire how I carry grief
how I smile when the ones I love drift away.
But my heart only wants to hold them tight,
and never let go.

They praise me for how I juggle hard times,
how I manage my work, my chores, my world
But sometimes, I just want to sit quietly,
with a warm cup of coffee,
let the cool breeze kiss my skin,
and feel gentle fingers ease the knots in my tired shoulders.

Sometimes, I don't want to be treated like a man.
I want to be seen as a delicate woman,
needing help with her bags.

My heels hurt
I'd love a soft pair of flats.
My bun aches
I want to let my hair loose,
let it dance in the wind.
A cute dress with pockets?
Would make me strangely, beautifully happy.

And maybe, just for a moment,
that could be enough
to not be strong.
Just soft. Just human.

Whispers of the End

Moumita Manna, (CSE/24/107)

One day we come,
One day we go.
Light.
like rivers that endlessly flow.
Life begins with a breath
and ends in silence, lost from sight.
We fear the dark, the final doom,
a place we•fve never been before.
Yet death is not just cruel or grim,
it•fs peace, a hush,
a guiding hymn.
It teaches us to hold what•fs dear ,
to wipe a tear,
to draw life near.
To say “I love you” while we can,
and walk with grace,
both child and man.
So let us live, not fear the end,
for death, in time, becomes a friend.
A guide to where we all must go,
a soft goodbye, a gentle flow.

See You Again

Subhadip Pramanik, (CSE/21/121)

Four years passed like whispers of the wind,
From six chimneys to four . a journey pinned.
By the calm of the Jhil, I often sat alone,
Now it's time to leave, but my heart hasn't grown.

The hostel echoed with midnight screams,
Tea in hand, chasing unfinished dreams.
Group chats, sleepless nights before the due,
Still, the laughter in mess lines always felt true.

We started with sparks and spinning wheels,
Crafting shapes and fixing what steel feels.
Holding pencils, drawing more than lines,
Then writing code that danced like rhymes.

We learned from chips and silent flows,
And tackled puzzles where logic grows.
Some days we played with numbers tight,
Some days were full of economic insight.

There were phases of signs and symbols deep,
Where structures of machines disturbed our sleep.
Blueprints of logic, languages without sound,
And building software with rules profound.

Some taught us how ideas get born,
Others showed how systems are worn.
We dreamt of minds that could decide,
And learned from truths our roots provide.

We stored what mattered, kept things in line,
Sent messages through invisible spine.
We trained our eyes to find the face,
And traced the patterns in complex space.

Equations helped us tame the wild,
Research shaped our inner child.
We taught machines to sense and feel,
And built strong walls no one could steal.

We solved big problems with simple grace,
Explored new markets in digital space.
We carved our names on websites wide,
And dove in oceans where data hides.

And then . the voices that stood so tall,
Our teachers, who gave us their all.
They never gave up, never let go,
Their every word, a lamp's glow.

And now the gate stands still and wide,
One last walk, one final stride.
Oh! , Kolaghat, you-fve shaped my flame,
Without you, I'd never be the same.

So I won-ft say goodbye in pain,
Just a whisper and soft promise .good- See You Again.-h
In dreams, in stories, in every gain,
My dearest college . See You Again.

Dedicated to CEMK - where we didn't just study, we lived, we loved, we became.

The Value of Failure in Achieving Success

– by Rohan Maity (ME/24/05)

Introduction:
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Conclusion :
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বাংলা ভাষায় ছাপার যোগ্য অপভাষা ঃ একটি তথ্যানুসন্ধান

—আলোক রঞ্জন পাল

প্রবন্ধটির শিরোনাম কি দিতে চলেছি, বলতেই এক সহকর্মীর উক্তি—"শালা, আর লেখার বিষয় পেলি না!"

আর-এক সহকর্মীর বক্তব্য— " ****, তুমি ও ই ই ই ই করো দিনরাত।"

একজন অবার ফোড়ন কাটলেন — "কি .... ই যে **** কাজ কারবার আপনার, বুঝি না বাবা।" আগের লাইন তিনটে আবার একবার পড়ুন। দেখুন, প্রথম উক্তিটির 'শালা' অপভাষা অর্থাৎ স্ল্যাং টি ছাড়া, বাকি দুটো স্ল্যাং কিন্তু আর লিখতে পারলাম না।

হ্যাঁ, এই ব্যাপারটা নিয়েই আজ দু'কলম লিখবো বলে বসলাম—বাংলা ভাষায় ব্যবহৃত ছাপার যোগ্য অপভাষা।

■ অপভাষার প্রয়োজনীয়তা ঃ-

না—না, অনুচ্ছেদটির শিরোনামটা পড়ে এত হাসির কিছু হয়নি। কথ্য বা লেখ্য ভাষায় এই রূপ শব্দের প্রয়োগ যখন বাস্তবে রয়েছে, তখন তা নিশ্চই কোন না কোন প্রয়োজনীয়তার হাত ধরেই ভাষায় এসেছে। কোন সন্দেহ নেই, পরিস্থিতি বিশেষে অপভাষার প্রয়োগ, অনুভূতির প্রকাশকে সম্পূর্ণ করে।

যেমন একটু কল্পনা করুন—ভারত-পাকিস্তান ক্রিকেট ম্যাচ, পাকিস্তান ব্যাট করছে, লাস্ট ওভারে দশরান দরকার, সারা ম্যাচে বেধড়ক মার খাওয়া বোলারের হাতে ক্যাপ্টেন বল তুলে দিল। ব্যাস্, এই দেখেই আপনার মুখ থেকে একটা আগুনের গোলা বেরিয়ে এল—"ষা ... হ, এই **** টাকে কেন বল দিলি!" তারপর ফাস্ট বলেই ওভার স্টেপিং নো বল—ফ্রি হিট—সিক্স। কি, বিড়বিড় করছেন।? তারপর একটা লোফা ক্যাচ বাউন্ডারী লাইনে মিস্। কি বলছেন এবার ঃ? তারপর যে বলে সিঙ্গল্স্ ও হয় না, ওভার থ্রো তে বাউন্ডারীর ওপারে। কিই .... !? জিভ ঠোট কি বলছে? তা সে যা...ই বলুক তা যে লেখার যোগ্য নয় এ ব্যাপারে আমি নিশ্চিত। আপনি কোনরূপ অপভাষার উল্লেখ না করে এমন একটা পরিস্থিতির উপযুক্ত অভিব্যক্তি প্রকাশ করতে পারতেন? ভেবে দেখুন, অসম্ভব।

এমনকি যার উদ্দেশ্যে কুকথাগুলো বলা হল সে যে শুনতে পেল কিনা, তাতে ও অনেক সময় কিছু যায় আসে না। নিজের অভিব্যক্তিটার পূর্ণাঙ্গ প্রকাশ করাটাই মূল্য উদ্দেশ্য।

আশ্চর্য হল, এমন গালিগালাজ আমরা নিজেকে নিজে ও দিয়ে থাকি। যেমন ধরুন, সকালে বাইরে কোথাও কাজে যাবেন। রাতে ব্যাগ ট্যাগ গুছিয়ে, ঘুমোনোর আগে মোবাইল টা চার্জে গুঁজে এ্যালার্ম দিয়ে শুয়ে পড়লেন। সকালে এ্যালার্মের শব্দে ধড়ফড় করে উঠে—এ্যালার্মটা বন্ধ করতে গিয়ে দেখলেন—লো-ব্যাটারী। এতক্ষনে খেয়াল হল, মোবাইল টা চার্জে তো লাগিয়ে ছিলেন, সুইচটা অন করা হয়নি। ভাবুন একবার নিজেকেই নিজে কি ভাষায় সম্বোধন করছেন।

■ গালির বৈচিত্র্য ঃ-

এ ..... এ বড় বিষম বস্তু। প্রবন্ধটি লেখার আগে আমি ইন্টারনেটে এই নিয়ে খোঁজাখুঁজি করছিলাম। অনেক ওয়েবসাইট, গালির ফোরাম, গালির শব্দ ভাণ্ডার এর সন্ধান ও পেলাম। কিন্তু সে ...ই একই সমস্যা। কোন গালিটাই

প্রচলিত লেখ্য ভাষায় ছাপার যোগ্য নয়। তবে খুঁটিয়ে দেখলে গালিগুলির বৈশিষ্ট কিছু জিনিস চোখে পড়ে। সেগুলো একটু উল্লেখ করছি।

ক) গালিগুলির অধিকাংশই শরীরের নির্দিষ্ট কয়েকটি অঙ্গের প্রচলিত নামের বিভিন্ন ধরনের অপভ্রংশ এবং তা সে পুরুষ নারী নির্বিশেষে।

খ) গালিগুলির একটা বড় অংশ হল কয়েকটি শারীরবৃত্তিয় ক্রিয়ার প্রচলিত নামান্তরের বিভিন্ন বিকৃতি।

গ) কিছু গালিগালাজ আবার চোখে পড়ল, পরিবারের লোকজনদের বিভিন্ন অবৈধ সম্বন্ধ সম্পর্কিত।

ঘ) তবে সবচেয়ে উল্লেখযোগ্য যে তথ্য ভাণ্ডারটি পেলাম, সেটি 'এ্যাকাডেমিয়া'র একটি গবেষনা পত্র। এতে অনেক উল্লেখযোগ্য পাওয়া গেল, যেমন—বুৎপত্তি, কোন ভাষা থেকে এসেছে ইত্যাদি।

ভাষাতত্ত্ববিদ জ্যোতিভূষণ চাকীর মতে ভাষা বিবর্তনের রূপরেখা বোঝাতে এই সমস্ত শব্দাবলীর সংরক্ষনের প্রয়োজনীয়তা ও আছে। এই শব্দাবলীর অধিকাংশই প্রচলিত লেখ্য ভাষায় ছাপার অনুপযোগী। তবু লেখার সামান্য স্বাধীনতা নিয়ে কয়েকটি শব্দ নিয়ে আলোচনা করছি।

যেমন, আছোলা দেওয়া (অনিষ্ট করা), আপানো (ছদ্ম প্রশংসা করা), আপার কাট (প্রেমজনিত আঘাত), আপেল (সুন্দরী মেয়ে), আবে (তাচ্ছিল্যের ডাক), এ্যাঙ্গেল মারা (বিপরীত লিঙ্গের কোন ব্যক্তিকে আড়চোখে দেখা), ইন্টুমিন্টু (প্রেম অর্থে), ওস্তাদ (বেশী পাকা), কেলা মারা (মস্তানি করা), কলিরকেষ্ট (চরিত্রহীন ব্যক্তি), কাওতালি (মস্তানি), কাকা (ডাক বিশেষ), কাটপিস (মাথায় ছিট), কুটির শিল্প (প্রাইভেট টিউশন), কেরোসিন (অত্যন্ত গন্ডগোল), কেলিয়ে যাওয়া (ক্লান্ত হয়ে পড়া), কেলো (অসুবিধায় পড়া), কেস খাওয়া (ফেঁসে যাওয়া), ক্যাপা (ক্ষমতা), ক্যালানে (অত্যন্ত বোকা), খগেন করা (ভুলিয়ে দেওয়া), খুদিরাম (নিজের ভালো না বোঝা), খেলানো (প্রেমের ভান), ঘন্টা (কিছুই নয়), ঘ্যাম (অত্যন্ত সুন্দর), চরানো (প্রেমের ছল করা), চিকনা (সুন্দর বা সুন্দরী অর্থে), চিজ (অদ্ভুৎ ব্যক্তি), চুলকে দেওয়া (উস্কে দেওয়া), চোতা (পরীক্ষার টুকলী), ছবি হয়ে যাওয়া (মারা যাওয়া), জালি (খারাপ), জিওগ্রাফি (চেহারা), ঝাড় খাওয়া (প্রহার, বকুনি), টাল (প্রেমজাতীয় দুর্বলতা, বোকা), ডানা কাটা পরী (অতীব সুন্দরী), ডানা গজানো (স্বাধীন গতিবিধি বেড়ে যাওয়া), ট্যাড়শ (নির্বোধ, বোকা), ঢ্যামনা (খারাপ ছেলে), ত্যাঁদড় (যে কোন কথা বললে শোনে না), ধ্যাড়ানো (সম্পূর্ণ রূপে অকৃতকার্য হওয়া), নেকু (বেশী ন্যাকামী করে যে), পেটো (ছোট সাইজের বোম), প্যাক দেওয়া (বিদ্রুপ করা), ফিদা (মুগ্ধ), বীভৎস (অসাধারণ ভালো), মুরগি (যে সহজে ঠকে যায়), ম্যাদামারা (অলস) ইত্যাদি।

এ সকল ছাড়াও কিছু নিত্যব্যবহৃত শব্দও বিভিন্ন খারাপ ইঙ্গিতপূর্ণ অর্থে ব্যবহৃত হয়ে থাকে— যেমন, কচি, কড়া, খাস্তা, ডাঁসা, চোখা, আলু, আগুন ইত্যাদি।

■ কিছু বিশেষ পর্যবেক্ষন :-

ব্যক্তিগত ভাবে "Observing People" আমার হবি। পথে-ঘাটে, দোকানে-বাজারে, ট্রেনে-বাসে, শিক্ষিত-অশিক্ষিত, বাচ্চা-বুড়ো, মহিলা-পুরুষ সবধরনের মানুষের কথাবার্তা ও কার্যকলাপ আমি সবসময় খুব মনোযোগ দিয়ে পর্যবেক্ষন করি। ফলে গালির বিভিন্ন বৈচিত্র প্রায়শঃই আমার চোখে পড়ে। বিভিন্ন ওয়েবসাইট, গালির শব্দ ভাণ্ডার, কথোপকথন থেকে একটা বিষয় পরিষ্কার যে, বাংলা ভাষায় গালির বৈচিত্র অসীম, কোন নির্দিষ্ট সীমারেখা নেই, যেমন—

ক) কলেজ ছাত্রদের কথার মধ্যে দুই অক্ষরের একটি অঙ্গ, মাত্রার মতো ব্যবহৃত হয়ে থাকে। কয়েকটি তিন অক্ষরের, চার অক্ষরের এবং পাঁচ অক্ষরের গালিও রয়েছে তবে সেগুলির ব্যবহার দুই অক্ষরের শব্দটির চেয়ে অনেকাংশেই কম, এবং অধিক অসন্তোষের সময়ই তার ব্যবহার চোখে পড়ে।

খ) গ্রাম্য বয়স্ক মানুষদের গালির ধরনগুলো আবার অধিকাংশই কিছু অবৈধ সম্পর্কের গ্রাম্য ভাষারূপ। সেগুলি অতিশয় কটু শব্দ হওয়া সত্ত্বেও অশৈশব শোনার ফলে গালিগুলি কেমন যেন নখদন্তহীন হয়ে পড়েছে। যেমন, শালা শব্দটির আক্ষরিক অর্থ, বিশেষ করে গালি হিসেবে যখন "শালা" বলা হয়, তখন তা দিয়ে পরোক্ষভাবে যা বলা হয়, তার প্রকৃত অর্থ বিষম হলেও অশৈশব শুনে শুনে কেমন যেন কান সওয়া হয়ে গেছে।

গ) কিছু কিছু শব্দ আবার ভাষা বিশেষে প্রয়োগ ভিন্ন। যেমন স্বয়ং মহাদেবের নাম "বালেশ্বর" হওয়া সত্ত্বেও তাঁর নামাংশটা বাংলায় গ্রহনযোগ্য নয়। মাননীয় প্রধানমন্ত্রী বিত্তশালীদের কালো টাকা বিদেশ থেকে দেশে ফিরিয়ে আনার ব্যাপারে যে সকল উক্তি করে ছিলেন তার বাংলা তর্জমা নিয়ে ট্রেনে বাসে আজও হাসি ঠাট্টার অন্ত নেই।

ঘ) আবার ভাষান্তরের ফলে অনেক কথোপকথন সহজ ও হয়ে যায়। যেমন মনে আছে, উচ্চমাধ্যমিকে জীববিদ্যা পড়ানোর সময়, বিশেষ দুটো অধ্যায় স্যার প্রায় ইংরেজীতেই পড়িয়ে ছিলেন। বিভিন্ন সংবাদ মাধ্যমে, বিভিন্ন আইনি প্রক্রিয়ায়, শিক্ষাক্ষেত্রে প্রায়শঃই শুনতে পাই কিছু কিছু স্পর্শকাতর শব্দ বা বাক্য ইংরেজীতেই বলা বা লেখা হয়। অবাক লাগলেও পরিস্থিতিটার সঙ্গে কেমন যেন অভ্যস্থ হয়ে গেছি।

ঙ) কিছু কিছু শব্দ আবার স্থানভেদে গালিতে রূপান্তরিত হয়ে গেছে। যেমন "কেলাকেলি" শব্দটা মেদিনীপুর জেলাতে মারামারি বোঝালেও বাঁকুড়ার কোন কোন এলাকায় এর অর্থ বড় বিষম। "চ্যাটি" শব্দটার আক্ষরিক অর্থ কথোপকথন হলেও নিউ জলপাইগুড়ির এক জায়গায় একথাটা প্রকাশ্যে বলে মার খেতে খেতে বেঁচে ছিলাম।

চ) নির্দিষ্ট কোন দল বা গোষ্ঠীর মানুষের মধ্যেও কিছু প্রচলিত গালি থাকে যার অর্থ ওই গোষ্ঠীর লোকেদের মধ্যেই সীমাবদ্ধ। বিশেষত স্কুল কলেজের ছাত্রদের মধ্যে-এর প্রচলন খুব বেশী দেখা যায়। এক গোষ্ঠীর মধ্যেকার ওই প্রচলিত উক্তি অন্যের কাছে অত্যন্ত জলভাত মনে হতে পারে কিন্তু ওই গালিগুলির ব্যাপকতা ওই গোষ্ঠীর প্রত্যেকের কাছে সুবিদিত।

ছ) কটু কথার একটা বড় বৈচিত্র্যের হদিস পাওয়া যায় কোন কোন শব্দের সমাস নির্ধারনে। বাপরে বাপ্, জালিয়ানওয়ালাবাগের হত্যাকাণ্ড দেখে রবীন্দ্রনাথ ঠাকুর 'নাইট' উপাধি ত্যাগ করে ছিলেন। আমার দৃঢ় বিশ্বাস, এই সমাসগুলো একবার পড়লে গুরুদেব নোবেল পুরস্কারটাও লজ্জায় ফিরিয়ে দিতেন।

■ **লেখ্য ভাষায় কুকথা প্রয়োগের বিভিন্ন প্রচলিত পন্থা ঃ-**

লেখ্যভাষায় কু-কথা প্রয়োগের বেশ কয়েকটি প্রচলিত পন্থা রয়েছে। অবশ্য দিনদিন নতুন নতুন পন্থাও প্রচলিত হচ্ছে। যেমন—

ক) **শর্টফর্ম ঃ** কিছু কিছু গালি শর্ট ফর্মে প্রয়োগ করা হয়। তবে এগুলি মূলতঃ গোষ্ঠী ভিত্তিক। একগোষ্ঠীর উক্তির মানে তাদের মধ্যেই সীমাবদ্ধ থাকে। যেমন একটা নির্বিষ উদাহরণ দেওয়া যেতে পারে - এম.বি.বি.এস. মানে— মা বাবার বেকার সন্তান। তবে সব উদাহরণ এমন নির্বিষ নয়। যেমন 'জি' লেটার টিতো কেমন যেত প্রচলিত নির্দিষ্ট একটা গালি বোঝাতেই ব্যবহৃত হয়।

খ) **লেটার বাঙ্গলিং ঃ** কোন কোন প্রচলিত গালির লেটারগুলো ওলট পালট করে গালিটি প্রকাশ করা হয়। তবে অক্ষরটির দিকে তাকালে মুহূর্তেই বোঝা যায় সেটি কি অক্ষর। তাই উদাহরণটা আর দিলামনা। আপনারা তো দেখামাত্রই বুঝে যাবেন। একটা চার অক্ষরের ম্যাং তো আজকাল টি-শার্ট এ ও লেখা থাকতে দেখা যায়।

গ) **ট্যাবু মরফিং ঃ** Natural Language Processing -এর ভাষায় ম্যাং ওয়াও লেখার পদ্ধতিকে বলে ট্যাবু মরফিং। যেমন— St ****d, bl ***y etc.

ঘ) এসব কিছুর বাইরেও নিত্য নতুন পন্থায় কটু কথা বলা বা লেখা হয়ে চলেছে, যেমন—হাতের অঙ্গভঙ্গি দিয়ে বোঝানো। গ্রেগ চ্যাপেল থেকে আমাদের মাননীয়া মুখ্যমন্ত্রী অবধি বিভিন্ন আকার ইঙ্গিত করে বিভিন্ন কথা বুঝিয়েছেন বিভিন্ন সময়।

ঙ) কথার মাঝে গালিগুলোকে বিপ্ বিপ্ শব্দ দিয়ে প্রতিস্থাপিত করাও আজকাল খুব প্রচলিত পন্থা। কখনো কখনো মুখে উচ্চারণ না করে শুধু ঠোঁট নেড়ে ও কটু কথা শোনানো হয়ে থাকে।

চ) "Whats app" বা "hike" এর মতো Community forum গুলোতেও emoticon এর সাহায্যেও মনের সুখে গালি দেওয়া যেতে পারে।

■ **সবশেষে, গালি দেওয়া কি অন্যায়?**

কে এ ... এ বলেছে অন্যায়!!! অন্তত আমি তো বলি না। কিছু কিছু অনুভূতির যথাযথ প্রকাশ করতে গালির ব্যবহার অনস্বীকার্য। তবে হ্যাঁ, অবশ্যই অবশ্যই অবশ্যই স্থান কাল পাত্রের ব্যাপারে সতর্ক থাকুন।

হস্টেলে বা ক্লাবে বন্ধুদের সঙ্গে বসে ক্রিকেট ম্যাচ দেখা আর বাড়ির বৈঠকখানায় বসে বাড়ির লোকজনদের সঙ্গে বসে ম্যাচ দেখা, দুটো ব্যাপারকে গুলিয়ে না ফেললেই হল।

আমার একান্ত ব্যক্তিগত একটা মতবাদ হল— "Using slang is the safest way to release negetive energy." তবে একই কথা রিপিট করি, অবশ্যই অবশ্যই অবশ্যই স্থান কাল পাত্র বিচার করে।

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ছোট্ট ভ্রমণ কাহিনী

সৌভিক ঘোষ
অ্যাসিস্ট্যান্ট প্রফেসর, ডিপার্টমেন্ট অফ কম্পিউটার সাইন্স এন্ড ইঞ্জিনিয়ারিং

তখন জুন মাস গুয়াহাটির আকাশে মেঘের ঘনঘটা, বাতাসে বৃষ্টির সুর। ঠিক এই সময়েই আমার যাত্রা ছিলআইআইটি গুয়াহাটির দিকে। মনের মধ্যে এক আলাদা রকমের উত্তেজনা কাজ করছিল। ছবি আর গল্পে যতটুকু শুনেছিলাম, গুয়াহাটির আইআইটি নাকি শুধু পড়াশোনার দিক থেকেই নয়, প্রাকৃতিক সৌন্দর্যের দিকথেকেও অনবদ্য। আর সত্যি বলতে, আমার অভিজ্ঞতা সেই ধারণাকে আরও পাকাপোক্ত করে দিল। ট্রেন থেকে নেমে যখন ক্যাবে চেপে ক্যাম্পাসের দিকে যাচ্ছিলাম, তখন থেকেই প্রকৃতির নিলগ্ধ স্পর্শ অনুভব করতে পারছিলাম। শহরের কোলাহল ধীরে ধীরে মিলিয়ে যাচ্ছিল, তার জায়গায় ভেসে আসছিল পাতার মর্মর ধ্বনি আরপাখির কিচিরমিচির। জুন মাস বর্ষার শুরু, তাই চারপাশের সবুজ যেন আরও গাঢ় হয়ে উঠেছিল, বৃষ্টিনাত গাছপালা এক আলাদা সতেজতা নিয়ে দাঁড়িয়ে ছিল। মনে হচ্ছিল যেন কোনো এক সবুজের রাজ্যে প্রবেশ করছি। প্রথম দর্শনেই বুঝেছিলাম, কেন একে ভারতের অন্যতম সুন্দর আইআইটি ক্যাম্পাস বলা হয়।

ক্যাম্পাসে যেতেই স্থাপত্য আর প্রকৃতির এক দারুণ মেলবন্ধন চোখে পড়ল। আধুনিক ডিজাইনের বিল্ডিংগুলো যেন প্রকৃতিরই অংশ, কোনোভাবে বেমানান লাগছে না। কিন্তু আমার মন কেড়েছিল এখানকার প্রাকৃতিক সৌন্দর্য। ছোট ছোট পাহাড়, আর তার মাঝে লেক । কিছু প্রাকৃতিক, কিছু কৃত্রিমভাবে তৈরি। সেই লেকগুলোতে আকাশের প্রতিচ্ছবি আর চারপাশের সবুজ পাহাড়ের ছায়া এক অপরূপ দৃশ্য তৈরি করেছে। সেরপেন্টাইন লেকের ধারে বসে অনেকক্ষণ কাটিয়েছি, শান্ত জলের দিকে তাকিয়ে দেখেছি, মাঝে মাঝে মাছরাঙার উড়ে যাওয়া। মনে হচ্ছিল না যে আমি কোনো বিশ্ববিদ্যালয়ের ক্যাম্পাসে আছি, যেন কোনো বন্যপ্রাণী অভয়ারণ্য এসে পড়েছি। শিক্ষার্থীরা গল্প করছিল, কীভাবে এখানে শিয়াল, আর হরেক রকমের পাখির দেখা মেলে তাদের কথায় ক্যাম্পাসের এই অনন্য ইকোসিস্টেমের প্রমাণ মিলছিল। জুন মাসের আর্দ্রতা আর বৃষ্টির আমেজ এইপ্রাকৃতিক পরিবেশকে আরও সজীব করে তুলেছিল।

এক সন্ধ্যায়, আমি ভিউপয়েন্টে হাইকিং করতে গিয়েছিলাম, একটি পাহাড় যা পুরো ক্যাম্পাস এবং দুরে প্রবাহিত মহিমান্বিত ব্রহ্মপুত্র নদের এক প্যানোরমিক দৃশ্য সরবরাহ করে। সেখান থেকে সুর্যাস্তটি ছিল সত্যিই শ্বাসরুদ্ধকর, আকাশকে অগ্নিময় রঙে রাঙিয়ে দিয়েছিল যা নিচে নদীতেও প্রতিবিম্বিত হয়েছিল। এটি ছিল এক গভীর শান্তির মুহূর্ত, প্রাকৃতিক বিশালতা এবং বুদ্ধিবৃত্তিক সাধনার এক নিখুঁত মিশ্রণ। মাঝে মাঝে হালকা বৃষ্টির ফোঁটা সেই অভিজ্ঞতায় এক ভিন্ন মাত্রা যোগ করছিল। চারপাশের সৌন্দর্যের পাশাপাশি, ক্যাম্পাসের প্রাণবন্ত জীবনও আমাকে মুগ্ধ করেছিল।

হোস্টেলগুলো, যেখানে প্রতিটি ছাত্রের জন্য আলাদা কক্ষ আছে, সেগুলো যেন শুধু ডর্ম নয়, বরং আরামদায়ক থাকার জায়গা। দ্রুতগতির ইন্টারনেট আর ভালো খাবারের কথা শুনেছিলাম (যদিও মায়ের হাতের রান্নার মতো নয়),যা সব হোস্টেলের ক্ষেত্রেই সত্যি সামগ্রিক ইতিবাচক পরিবেশে অবদান রাখছিল। বলে মনে হয়।

আইআইটি গুয়াহাটিতে আমার এই সফর শুধু একটি ভ্রমণ ছিল না, এটি ছিল একটি অভিজ্ঞতা। এটি প্রমাণ করে যে একাডেমিক শ্রেষ্ঠত্ব কীভাবে প্রকৃতির সাথে সঙ্গতি রেখে বিকশিত হতে পারে, এমন একটি পরিবেশ তৈরি করে যা মন এবং আত্মা উভয়কেই পুষ্ট করে। আমি যখন চলে আসছিলাম, তার সবুজ আলিঙ্গন এবং শান্ত ব্রহ্মপুত্রের স্মৃতি মনে রয়ে গেলো, এক সত্যিকারের অনন্য প্রতিষ্ঠানের এক স্মরণীয় অভিজ্ঞতা।

মাতৃ ভাষা

সুপ্রকাশ পাল, (CSE/23/012)

তুমি-ই আমার প্রথম ভাষা, যে ভাষায় আমি প্রথম ডেকেছি মা'কে, প্রথম শুনেছি ভালোবাসার কথা। তোমার শব্দেই আমার পৃথিবী গড়ে উঠেছে, তোমার বর্ণমালায় আমি প্রথম লিখেছি আমার অনুভূতি। তুমি শুধু ভাষা নও, তুমি আমার আত্মার পরিচয়, আমার অস্তিত্বের প্রতিটি পরশে লেগে থাকা এক অনুভূতি। ভাষা শুধু কথা বলার মাধ্যম নয়, ভাষা মানে অনুভব করা, ভাষা মানে ভালোবাসা। তাই তুমি-ই আমার প্রথম ভালোবাসা, কারণ তোমার মাধ্যমেই আমি প্রথম পৃথিবীকে ভালোবাসতে শিখেছি। যখন আমি আমার প্রথম কবিতা লিখেছিলাম, তা ছিল তোমারই শব্দে। যখন আমি কারও জন্য প্রথম ভালোবাসার কথা বলেছিলাম, তা ছিল তোমারই ভাষায়। তুমি ছাড়া আমি ভাবতে পারি না, তুমি ছাড়া আমি অনুভব করতে পারি না। তুমি আমার শৈশবের খেলা, তুমি আমার প্রথম স্কুলের পাঠ, তুমি আমার মায়ের মুখে শোনা প্রথম গল্প। তোমার শব্দেই আমি দুঃখ প্রকাশ করি, তোমার শব্দেই আমি আনন্দে হাসি। তোমার মাধ্যমেই আমি আমার মনের ভাব অন্যদের কাছে পৌছে দিই। তুমি শুধু ভাষা নও, তুমি আমার সঙ্গী,আমার পথপ্রদর্শক, আমার ভালোবাসার সবচেয়ে প্রিয় রূপ।

অনেক ভাষা আছে পৃথিবীতে, অনেক রঙের মানুষ আছে, অনেক সংস্কৃতি আছে, কিন্তু আমার কাছে তুমি সবার চেয়ে আলাদা, সবার চেয়ে প্রিয়। আমি তোমার শব্দের মাঝে হারিয়ে যাই, তোমার বাক্যের মাঝে খুঁজে পাই আমার পরিচয়। তুমি আমাকে চিনতে শিখিয়েছ, জানতে শিখিয়েছ, ভালোবাসতে শিখিয়েছ। তুমি-ই আমার প্রথম ভাষা, তুমি-ই আমার প্রথম ভালোবাসা। ভাষার সঙ্গে ভালোবাসার একটা গভীর সম্পর্ক আছে। কেউ যখন নিজের ভাষায় কথা বলে, তখন সেটা শুধু কথোপকথন নয়, সেটা অনুভূতির প্রকাশ। আমি তোমার শব্দের প্রতিটি উচ্চারণকে ভালোবাসি, তোমার প্রতিটি বাক্যকে হৃদয়ের গভীরে স্থানদিই। কারণ তুমি আমাকে শিখিয়েছ কেমন করে হাসতে হয়, কেমন করে কাঁদতে হয়, কেমন করে নিজের আবেগ প্রকাশ করতে হয়। তুমি আমার প্রথম ভাষা, তুমি আমার প্রথম ভালোবাসা-একটা বন্ধন, যা কখনো ছিন্ন হবে না। আমি তোমাকে যত ভালোবাসি, ততই আমার অস্তিত্ব আরও দৃঢ় হয়, আমার পরিচয় আরও স্পষ্ট হয়। আমি তোমার মধ্যে খুঁজে পাই আমার শেকড়, আমার এঁতিহ্য, আমার ভালোবাসার নিখুঁত রূপ। তুমি আমাকে গড়ে তুলেছ, তুমি আমাকে পরিচয় দিয়েছ আর আমি আজীবন তোমার মধ্যেই বাঁচতে চাই।

মেঘের মন

পূজা চৌধুরী
অ্যাসিস্ট্যান্ট প্রফেসর,
ডিপার্টমেন্ট অফ
কম্পিউটার সাইন্স এন্ড ইঞ্জিনিয়ারিং

নীল আকাশের ক্যানভাসে
ভেসে চলে ধুসর মেঘ,
কখনো হাসে কখনো কাঁদে
নানান রকম ভঙ্গি নিয়ে।
ভোরবেলায় সূর্যযখন
আলতো করে দেয় ছোয়া,
মেঘের গায়ে সোনার আভা
হৃদয় জুড়ে মধুর ছোয়া।
দুপুর হলে ক্লান্ত হয়ে
চুপটি করে এক কোনায়,
পাহাড় ছুঁয়ে ভেসে চলে
নদীর বুকের চিরকোণে।
হঠাৎ যেন রাগে ফেটে
বজপাতের জয়ধ্বণি,
তবুও সে প্রেমিক মেঘ
চেনা আকাশের আপন ধনী।
ঝরে পরে কুয়াশা ফোটা
চোখের কোনে নরম জল,
মেঘের মন বোঝা দায়
বড়োই সে খামখেয়ালি।

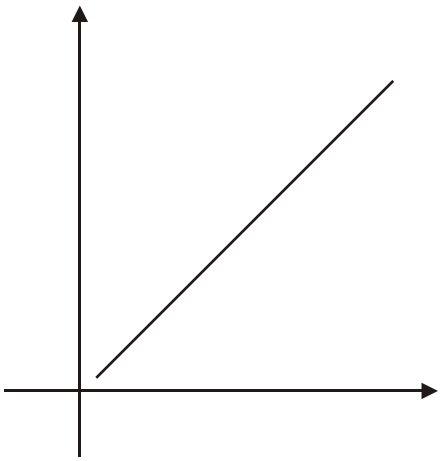
নীরবতা

রাহুল সরকার
অ্যাসিস্ট্যান্ট প্রফেসর,
বেসিক সাইন্স এন্ড
হুইম্যানিটিজ ডিপার্টমেন্ট

বৃষ্টি ভেজা সন্ধের শহর
কৃর্তিম প্রান্তিক আলো,
উঁচু চাহিদার ইমারত
মাঝে মাঝে হেরে যাওয়া ভালো।
চোখে স্বপ্নের কালসিটে
শব্দ, শব্দের নীরবতায় সারারাত,
অচেনা শহরে পালানোর ফন্দি!
মন, মনের অনিহায় কুপোকাত।
শত শত ইচ্ছের ফাঁদে
থতমত মানুষের মতো।
অযাচিত পোড়ে নিকোটিন, যেন,
দেয়ালের বুকে পেরেকের ক্ষত।
বিক্রীত পণ্যের মাঝে
সারি দিয়ে মাংসল দেহ,
যেতে যেতে হাতছাড়া যত
সোজাপথে ফেরেনি তো কেহ।
আমি সেই আমিতেই
হারিয়ে একাতে নীরবতায়
তুমি তুমি করা শেষ হলো,
আমার শেষ হেরে যাওয়ায়।

y = mx + c

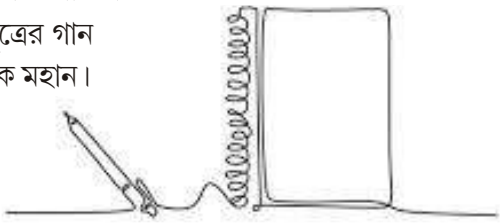
সিদ্ধার্থ চ্যাটার্জী
অ্যাসিস্ট্যান্ট প্রফেসর
কম্পিউটার সাইন্স এন্ড ইঞ্জিনিয়ারিং ডিপার্টমেন্ট



এক রেখা চলে অচেনা পথে,
যেখানে আর খুঁজে মঞ্চে।
m সে *slope*, পথের সুর বায়,
উঠান-পড়ান গড়ে আকাশ ছুঁয়ায়।

c সেই *intercept* শুরু বিন্দু,
যেখান থেকে পথ পায় তার নন্দু।
x যত বাড়ে, *y* তত বেড়ে যায়,
এই রেখার গল্প তাই সাজায়।

সোজা সোজা পথ একচেটিয়া,
গাণিতিক মায়ায় ভরা জগৎ সেতিয়া।
$y=mx+c$, এই সূত্রের গান
জীবনের রেখা আঁকে মহান।



নামকৃপা

মৃত্যুঞ্জয় মিদ্দ্যা
অ্যাসিস্ট্যান্ট প্রফেসর
ইনফরমেশন টেকনোলজি
ডিপার্টমেন্ট

একর, ও কর, সে কর
না করে তুই, অঝোর ঝরে নাম কর।
নাম কর তুই, খেতে-পড়তে, চলতে-ফিরতে
সুখে-দুঃখে, কর্মে বিশ্রামে, শুতে-ঘুমোতে।
নামকর তুই বাড়িয়ে গতি
মুখমণ্ডলে ফুটবে জ্যোতি
কর্মেনিপুন ও আসবে মতি
আনন্দ ও আরাম পাবি অতি
অহং যাবে গলে
বিনয়ী রূপ জলে
ব্যক্তিত্বটা উঠবে ফুটে
প্রকৃত মানুষের বৈশিষ্ট্যে
জ্ঞানের আলো উঠবে জ্বলে
নিজে কে চিনবি মহা মূর্খ বলে
তাঁর প্রতি তোর ভালোবাসা
ভক্তি হয়ে পৌছে যাবে প্রেমে
উড়ে যাবে তোর সকল দ্বন্দ্ব
প্রতিষ্ঠিত হবে জীবনের ছন্দ।
শান্ত হবি, সুকেন্দ্রিক জীবন পাবি
রিপু গুলি কাবু হয়ে খাবে খাবি।
দেহ-যন্ত্রাংশ সব সক্রিয় হবে
ক্লান্তি ও অলসতা কেটে যাবে।
স্নায়ু দৃঢ়, মন শক্ত, নিখুঁত হবে কর্ম
শরীর পাবে রোগ মুক্ত বর্ম।
তাঁর বাণী সব উঠবে ফুটে
চারিয়ে যাবে তোমার চরিত্রে
থাকবে নাচিন্তা হবে না ভাবনা
নাম ময় মন হবে মুক্তমনা।
মন পিন্ডি থেকে ব্রম্মাণ্ডিতে যাবে
সেদিন চৈতন্য তোমার হবে।
যা হওয়ার, তা হবে সময় মত
বিবেক তোমার থাকবে সদা জাগ্রত।
নিরবিচ্ছিন্ন তাঁর দয়া হবে অনুভূত
পূরণ হবে তোর এ জীবনের উদ্দেশ্য।
প্রকৃতি তোমার সহায় হবে
মোক্ষে তুমি পৌছে যাবে।
দুঃখেও সুখ, সুখেও সুখ, সদা সুখ পাবে
সবকিছু যা আপনি শুভ হবে।
হয়ে যাবি সম্পূর্ণ তার
করে যাবি ভব সাগর পার।
তাই, এ কর, ও কর, সে কর
না করে তুই, অঝোর ঝরে নাম কর,
সব করা তোর আপনি করা হবে।
তাই দীক্ষা তুই এক্ষুনি নে
সময় না নষ্ট করে
জেনে নে নাম ও কায়দা
যদি নিতে চাস উপরিউক্ত ফায়দা
শুরু কর তুই সাথে সাথে
ফল পাবি হাতে নাতে।

কাঠগোলাপ

অর্ণব সামন্ত, (CSE/22/168)

তুমি একবার চেয়ে দেখো।
শ্বেত পাম নাইবা দিলাম,
কাঠগোলাপে ভরিয়ে দেবো।

নীরব শীতল আলতো হাওয়ায় নিখোঁজ আমায় আবার পাবে,
সেই হাওয়ারই আলিঙ্গনে, আমার শরীর শান্ত তবে।

যেমন করে, তারা জোড়া ভিড়তে থাকে আকাশ স্রোতে,
তেমন করে, নামলে শ্রাবণ ভিড়তে জোড়ায় নিজের মতে।

তোমার তরে সাদার মায়া খুঁজেবো একা হৃদয় ঘরে,
ঠিক যেভাবে, কৃষ্ণ খুঁজে জামিনী পুষ্প রাতের তরে,
ঠিক তেমন করে, কাঠগোলাপে ভরিয়ে দেবো।

শ্বেত পাম নাইবা দিলাম, গুচ্ছভরে মায়া নিও,
আমায় না'হয় স্মৃতির মতো, নিজের চোখে ভিজতে দিও।

যেমন করে মায়া ভরায় প্রকৃতির এই বিশালতা,
ঠিক তেমন করে, কাঠগোলাপে ভরিয়ে দেবো।

যেমন করে দীর্ঘশ্বাস বিচরিত হয় শরীর জুড়ে,
ঠিক যেভাবে, বসন্তকে কোকিল ভরায় নিজের স্বরে,
ঠিক তেমন করে, কাঠ গোলাপের সাদার মায়ায় ভরিয়ে দেবো।

বিবাদ

অরিতা দে, (CSE/24/056)

কলমে রেখেছি তীব্র নত শির
দাঁড়াও এসে অঙ্গীকার হয়ে।
মরমে ব্যাথা পেয়েও,
আজও জ্বলে উঠেছি মশাল হয়ে।

কণ্ঠ আজ শুকিয়েছে,
ভিজেছে মুখ অশ্রু জলে,
আনন্দময়ী মিছিল কোথায়!
ধরেছি নিজেকে সবল বলে

অভিমানী রাতের চাঁদবলে -ত্ত
তোমার চোখে আগুন জ্বলে!
রক্তে মিশে গেছে প্রতিজ্ঞা সব,
ভয়কে রেখেছি পদ তলে।

তাই এসো, হাতে রাখো হাত,
বুকের মাঝে আগুন হোক।
আমরা যারা ভাঙা নই,
তারা আসুক ইহা পথের প্রতিশোধ!

ছিন্ন যারাকরলে মোদের
আশঙ্কায় ভিজুক তাদের কল্পনা।
বিবৃতিহীন বিবাদ চলুক
বিশ্ব জিতুক প্রতিশ্রুতির জন্পনা।

কম্পিউটার টেকনোলজি

অভিজিৎ মান্না, (CSE/22/024)

কম্পিউটার টেকনোলজি, আধুনিক যুগের চালক,
জ্ঞান-বিজ্ঞানে তুমি আজ শ্রেষ্ঠ নিদর্শক।
তথ্যের সাগরে তুমি নৌকা বেয়ে,
নতুন পৃথিবী গড়ো তুমি ধাপে ধাপে গিয়ে।

ডিজিটাল দুনিয়া, ইন্টারনেটের পথ,
তোমারই ছোঁয়ায় বদলেছে জীবনের রধ।
শিক্ষা, স্বাস্থ্য, ব্যবসা কিংবা খেলা,
তোমার সাহায্যে এগোয় প্রতিটি বেলা।

ডাটা প্রসেসিং, সফটওয়্যার বানানো,
সবই তোমার টেকনোলজি তে প্রাণ পায় জানা।
এআই, রোবট, মেশিন লার্নিংয়ের যাত্রা,
কম্পিউটার টেকনোলজির আধুনিক পাটায়।

তুমি আনো গতি, তুমি আনো জ্ঞান,
তোমারই জোরে বদলেছে প্রাণ।
দিনের শেষে আমরা বলি একবাক্যে,
কম্পিউটার টেকনোলজি- ভবিষ্যৎ আমাদের হাতে।

নিঃশব্দের ভাষা

সুজাতা সরকার, (CSE/23/152)

প্রথম দেখা টিউশনের ক্লাসে,
ডিসেম্বরে ঠান্ডা হাওয়ার আশে পাশে।
চোখে চোখ পড়ে, কথা হয় না,
তবুও মনটা একটু কাঁপে যেন, যেন জানা।

লকডাউনে শুরু হয় অনলাইন ক্লাস,
প্রতিদিন একসাথে কাটত কিছু ফাঁস।
ছেলেটা ফোন করত ঠিক একসময়,
মেয়েটিও বসে থাকত, মনে এক আশার আলো জয়।

ঝড়-বৃষ্টিতেও চলত ভিডিও কল,
দুজনেই পেত শান্তি, কষ্ট পেত দোল।
কথার মাঝেই যেন জমে উঠত ভাব,
তবে কেউ বলেনি কিছু, চুপ ছিল স্বভাব।

একদিন হঠাৎ বন্ধ হলো সব কথা,
মেয়েটিও কিছু বললো না, বুকের ব্যথা চুপচাপ রাখা।
একাদশ শ্রেণিতে ছেলেটা দূরে চলে যায়,
মেয়েটার মন কেমন যেন করে, চোখটা ভিজে যায়।

তারপর আবার দ্বাদশে কবে যেন দেখা,
আস্তে আস্তে ফিরে এলো পুরোনো রেখা।
সেপ্টেম্বরে এক রাতে কিছু কথা কাটাকাটি,
মেয়েটার জোরে ছেলেটা বলে ফেলে মনের কথাটি।

মেয়েটাও আর চুপ করে না, জানিয়ে দেয় সব,
এইভাবেই শুরু হয় প্রেমের নতুন রঙের ছব।
চুপচাপ ভালো লাগা বদলে যায় ভালোবাসায়,
দুজনার মন মিলল -ত্ত হারানো সময়ের আশায়।

মুখোশের আড়ালে

প্রতিভ রায়, (AIML/24/028)

মনের কথা মুখে পাইনা প্রকাশ
চোখের চাহনিতে মিথ্যের বাস।

কাকে বলবো ভালো,
কার হাত ধরবো বলো...
মুখোশের আড়ালের
ওই মুখটা কি সত্যি ভালো? ?

চোখে তার অপার স্নেহ,
যন্ত্ত ও করুণা;
সেই চোখের কাজলে কি
মিশে নেই কোনো ছলনা... ?

সত্যি লুকানো থাকে
অতীত, মিথ্যার অন্তরালে.
মুখ কি উঁকি দেবে না, রয়ে যাবে কি
মুখোশের আড়ালে..?

আমি, এক অন্য আলো

মাইসা ফারহিন, (CSE/23/176)

নীরব এক কণ্ঠ আমার বুকে বাজে,
মনের ভেতর নিত্য জাগে একটা সাজে।
আমি দেখি নিজেকে আয়নার ঠিক পেছনে, যেখানে ভয় আর স্বপ্ন একসাথে বসে।

কখনো কাঁদি আমি নীরব রাতে,
চিন্তাগুলো আসে অস্পষ্ট হাতে।
হৃদয়ের ভারে যখন দম বন্ধ হয়,
আমি ভাবি, নারী কি শুধু বোঝা বই?

চোখগুলো দ্যাখে, কিন্তু বোঝে না মন,
হাসি খুঁজে চুল, কাপড় আর বরণ।
তাদের মাপে আমি ছোটো হই দিনে দিনে,
স্বপ্নগুলো শুকিয়ে যায় বাঁধার ঘেরাটোপে।

তবুও আমি গড়ি নতুন সকাল,
ভাঙা মনেই জাগে আশার আলোঝলক।
আমি মায়ের মতো শক্ত, প্রেমিকার মতো নরম,
আত্মবিশ্বাসে গড়া এক অদম্য জ্যোতিষ্ক।

আমি চাই এক পৃথিবী-ভয়হীন, মুক্ত,
যেখানে নারী কাঁদবে না চেপে মুখ।
আমার অন্তর, আমার চিন্তা, সমাজের আশা-
এই তিনেই গাঁথা হোক নতুন ভাষা।

পাঁজর

ইক জাশু, (CSE/23/169)

আমার বড় একলা লাগে
পাঁজর থেকে বন্ধু বলে।
কাঁদছো কেন, বন্ধু আছে
আশেপাশেই, নামবে জলে?

বন্দী থাকা কঠিন ভীষণ,
সূর্য দেখবো একটুখানি!
বোকার মতো কীসব বলো?
সকাল বিকেল চোখে পানি!

শিক্ষক

Shyamal Bera, (CSE/24/039)

শিক্ষার গুরু তুমি
নির্মল আলো...
অজ্ঞানের বন্ধু তুমি
জ্ঞানের প্রদীপ জ্বালো...
অন্ধকারে হারিয়ে গেলে
দেখাও আলোর পথ...
পুষ্পে পুষ্পে ভরে উঠুক
তোমায় বিজয়রথ....
তোমার শিক্ষায় হোক না
চেতনার উন্মেষ...
অজ্ঞানতার অন্ধকার
কর তুমি নিঃশেষ...
তোমার অশীষ মাথায় যেন...
থাকে অবিরাম...
চির উজ্জ্বল ক্ষ্মশিক্ষকক্ষ্ম তুমি
তোমায় শত কোটি প্রণাম...

সত্যের বিনিময়

নয়না মান্না, (CSE/23/145)

এ পৃথিবীর বুকে জমে থাকা সহস্র সত্যের মধ্যে
এও এক চরম সত্য যে আমি তোমাকে চাই।
এই পাঁজর ভাঙ্গা সত্যের মধ্যে লেগে থাকা
এক ফোঁটা রক্তের দাগের মতোই এও সত্য যে,
তোমাকে পাওয়ার ইচ্ছা প্রকাশ করি নাই।
সময়? সেতো কালের নিয়মে বয়েই চলে,
আহা! সে যদি শিশির ফোঁটার মতো
একটি বার ঘাসের আগায় স্থান পেতো ?
আহা! সেও যদি সদ্য জেগে ওঠা সূর্যের আলোয়
অন্তত একটি বার নেচে ওঠার ছাড় পেতো?
কিন্তু না, এও কি সম্ভব?
সময় চলিয়া যায়, নদীর স্রোতে প্রায়
ধরে তাকে আহা কার সাধ্য?
তেমনই দূর থেকে তোমাকে চাই
কাছে পাওয়ার কামনা নাই
না পাওয়া সে আমার ভাগ্য।
ভাগ্যের পরিহাস নির্মম নিরাকার
মেনে নেওয়া তা বড়ো অসাধ্য।
তবুও এ পারাবার বেনাম অঙ্গীকার
মেনে নেওয়া জীবনের ছন্দ।
মৃত্যু-জীবন কেনো, হাসি-কান্নাও হেন ছন্দ-বদ্ধ ছন্দ-ময়,
না পেলেও মানতে হয় সত্যের বিনিময় ভাগ্যের এ নির্মম পরিণয়।

সফেদ

সেখ হাবিব হোসেন, (CSE / 23/118)

উত্তর আকাশ লালে রাঙা
সাদা বরফ রক্তের দাগ,
শ্রবণশক্তি ব্যর্থ সবার
পায়না কেউ তাদের নাদ।

ভূস্বরগগে আজ নরক নামে
শয়তানদের চলে আসা যাওয়া,
বন্দুকে বন্দুকে চলে গোলাবাজি
হয়না আর তাদের স্বর্গ পাওয়া।

শিশুদের মুখে বারুদ গুঁড়ো
ঠোঁটকাটারা আজ নিরব সব
দেশে দেশে মৃত্যু মিছিল
বন্ধ পাখিদের কলরব।

আমার রক্ষক থাকে সোজা হয়ে
গুলির আঘাত পারেনি ফেলতে,
তিরঙ্গা উড়ে মেঘেদের উপর
পারেনা কেউ তা নামাতে।

থামবে একদিন এ লড়াই
বরফ আবার হবে সাদা
ক্ষতহীন হবে রক্ষীদের দল,
মাটিতে থাকবে না শয়তানের থাবা।

বৃষ্টি

ঋত্বিকা বাগ, CSE/24/163

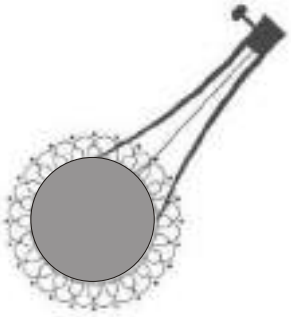
বৃষ্টি দিয়েই শুরু হয় সবুজের প্রতিচ্ছবি।
বৃষ্টি দিয়েই শুরু হয় কবিতা, গান আর গীতি,
বৃষ্টি দিয়েই শুরু হয় নতুন জীবের প্রাণ।
বৃষ্টি দিয়েই শুরু হয় নতুন ওড়ার গান,
বৃষ্টি দিয়েই শুরু হয় নতুন নাচের ছন্দ।
বৃষ্টি দিয়েই শুরু হয় ভিজে মাটির গন্ধ,
বৃষ্টি দিয়েই শুরু হয় মায়ের মুখের হাসি।
বৃষ্টি থামার পর চারিদিকে ফুল ফোটে রাশি রাশি,
বৃষ্টি দিয়ে শেষ হয় গাছের পাতার নড়া।
বৃষ্টি দিয়ে শেষ হয় ঠাকুমার গল্প পড়া,
বৃষ্টি দিয়ে শেষ হয় অদূর দৃষ্টি,
বৃষ্টি হলো ভগবানের এক অবাক সৃষ্টি।।

নববর্ষ

সৌভিক গন্ড, (CSE/24/146)

ফুরালো রজনী, আসিল প্রভাত,
আসিল নবীন বর্ষ।
ডাকিলো কোকিল শেষের লগনে,
জাগিল প্রাণেতে হর্ষ।
আহ্বান তারি, কি মধুর লাগে
মোর এ কর্ণ কুহারে!
দেবাশীষ বুঝি পৌঁছিল ওরে,
আজি এ হৃদয় গহ্বরে।
বরষের ডাকে, কেনা দেবে সাড়া?
কেনা চলিবে গো পথ?
বৈশাখ তাই দূতরূপে আসি,
সাজায়েছে মহারথ।
প্রাচীন যতেক সবার সাথে,
নবীনের অন্বয়।
প্রাচীন হৃদয়, নবীন ভাবের
হইল অভ্যুদয়।
প্রাচীন সবার অন্তর মাঝে,
নতুন কথা কয়।
প্রাচীন সবার স্মৃতির পাতায়,
নতুন লেখা হয়।

প্রাচীন সবার চলার পথে,
প্রাচীন ছিল সব।
নবীন আজি, নবীন মনে,
তুললো নবীন রব।
নবীন বর্ষ, বারে বারে আসে,
বলে যায় একই কথা-ত্ত
মোছরে সকল প্রাচীন কালিমা,
ভুলরে সকল মর্মব্যথা।
বরণ করিয়া লহ রে আমারে,
পরিহার করি সব।
বরণ করিয়া লহ রে আমারে,
জিতিবে সকল, তব।
আমি যে সবার মুক্তি সাগর,
আমি যে সবার হর্ষ।
আমি যে সবার সাধনার মূল,
আমি যে নবীন বর্ষ।



বধূয়া - সে রাঙামাটির দেশ

শ্রীমন চক্রবর্তী, (ECE/22/44)

বধূয়া, সে তো গ্রামীণ মেয়ে
দুর পাড়াগাঁয়ে থাকে,
শান্ততার স্বভাব বঠে, তবে-
আঁখিদুয়ে সদা চাঞ্চল্য রাখে।

সবুজ তাঁর শাড়ির পাড়ের খুঁট-
জল ঘাঁটে ক্ষেতে আপনমনে,
প্রজ্বল লাল জ্বলজ্বলে সিদুরের টিপ্
-মেটায় দূষণ শহরের কোণে।

দুষ্টু তাঁর চলন, নিয়ে ধান শিষ
-যেন শৈশব হয়েছে গোলা,
মাথা নত, চুপটি ভাবলে ভুল
নিজসঙ্গে সে; কী ভীষণ হরবোলা!

হ্যাঁ, বধুয়া আমার সে
ঘরের লাল টুকটুকে সাজ,
মলম আমার চিন্তা ব্যাধির
-মেলায় কপাল ভাঁজ।

শান্তি পাই আমি বাঁচতে সেথা
যেধা খুঁজে পাই আমি তারে,
তাই তো ফিরি আমি দূর পাড়াগাঁয়ে
নিয়ে চিন্তা বারে বারে।

তাঁর কালবৈশাধীর কেশের ঝড়ে
আমার আলিঙ্গনের ভঙ্গি,
বায়ুসম যায় বেরিয়ে; ছুঁয়ে কাটিয়ে
সে আমার মুচকি হাসির সঙ্গী!

বেকার আমার শহুরে পাঠশালায়-
এখন সে কিশলয়; এনে বন্দি,
মাতে তো ঘর সৌন্দর্য্যের ঘ্রাণে
কিন্তু হারিয়েছে সে ঘর-পালানো ফন্দি।

এটা তো চাইনি আমি মোটেই।
চাই সেই পুরানো দুষ্টু মিষ্টি মেয়ে,
তাই বধুয়া এখনো দূর পাড়াগাঁয়ে
আমার পছন্দে, তাঁর আদলে ছেয়ে।।

কল্পদর্শন

শাশ্বত প্রধান, (CSE/21/013)

হৃদয় যখন বিদীর্ণবেলায়
দীর্ঘ দিবস পার হয়ে যায়,
কোন সে গভীর অন্ধকারে
সুবর্ণ মেঘ মিলিয়ে যে যায়।

ছলনাকেই সত্য মেনে
সর্বনাশের দিন সে গোনে।
মনের পাঁজর তখন শুধু
কষল্পনারই গল্প বলো

মিথ্যে বাস্তবতার মোহে
তোমায় খোঁজা মনের রঙ্গশালায়,
স্নিগ্ধ শীতল রাতের মতো
নীরব কোনো সুরের মায়ায়।

দেখেছি তোমায় স্বপ্নে হাজার
যেন জলছবিতে আঁকা পাহাড়,
তোমার আমার মাঝে শুধুই
ধূসর মেঘের আবছা দেওয়াল।

তবুও সেই মেঘের পরে
রদ্ন খোঁজা তুষারঝড়ে,
শীতল সোতে ভেসে যাওয়া
অলীক কৌতুহলে।

নিঃস্ব সমাজ

স্বপ্নিল মান্না, (ECE/23/03)

আমি স্তব্ধ দগ্ধ এক ক্লান্ত পৃথিবী,
যার নাই কোনো অস্তিত্ব।
আমি নিঃস্ব সমাজে খুঁজিয়াছি মায়াবিনী,
খুঁজি নাই মনুষ্যত্ব ।

সমাজ হতে আজ ছুটিয়াছি দূরে,
হারাইয়াছি দিক দিগন্তে।
লিখিয়াছি গান প্রকৃতির সুরে,
থামিয়াছি জীবনের অন্ত্যে।

হিংস্র সমাজ কেবল ধ্বংসের কারণ,
তবু তোমার চেতনা ফিরিবেনা।
যন্ত্র করেছে আজ তোমায় বরণ,
তাই তুমি অনুভূতি বুঝিবেনা।

আমিস্তব্ধ দগ্ধ এক ক্লান্ত পৃথিবী,
যার নাই কোনো অস্তিত্ব।
আমি নিঃস্ব সমাজে খুঁজিয়াছি মায়াবিনী,
খুঁজি নাই মনুষ্যত্ব ।

কবিতাকে ভালোবেসে

সোহম ঘোষ, (CSE/22/091)

যতটা পেরেছি গুছিয়ে নিয়েছি, কবিতাকে ভালোবেসে।

ভেসে যেতে যেতে সাঁতরে উঠেছি- কলমে কাগজে

বুনেছি স্বপ্ন শুধু কবিতাকে ভালোবেসে।

কবিতা আমার বাসনার ফুল প্রতিদিন গাঁথি মালা।

সেই মালা দিয়ে সাজিয়ে তুলি আমার রচনার থালা।

পূজার অর্ঘ্য করেছি নিত্য কবিতার কাছে বসে।

রোজ খুঁজে চলি আমি মনিকাঞ্চন পাহাড়।

দুহাত ভোরে পেয়েছি, বেঁধেছি হৃদয় আমার।

পরম যতনে আগলে রেখে শব্দঅক্ষরে লাগানো চারা

হয়েছে মুখর শাখা প্রশাখায় যতটা পাই সবই কবিতার,

রোজ রোজ আমি মিটাই তৃষ্ণা কবিতার সুধা রসে

যা কিছু আমার আছে সঞ্চিত কবিতাকে ভালোবেসে।

জননী

Sudipta Manna, (ECE/22/60)

''জননী জন্মভূমিশ্চ
স্বর্গাদপী গরিয়সীদ''-
কিন্তুমা,
একি ছিন্নভিন্ন রূপ তোমার!
এই কি সেই বুক-ত্ত
যেখানে শুয়ে থাকত ইতিহাসের গৌরব?
আজ রক্তে রাঙা রাজপথে
ঘুরে বেড়ায় ক্ষমতার কুকুরেরা,
আর মানুষেরা খাঁচায় বন্দি
নিজের চোখ, নিজের ভাষা নিয়ে।

তোমার বুকেই দেখা যায় মা,
নারী হওয়ার অভিশাপ বয়ে বেড়ানো মেয়েটি,
যার কণ্ঠ দমিয়ে দেয় নগরের শিস,
আর কিছু শুয়োরের চোখে খেলে হাহাকার!
কে তাকে রক্ষা করবে মা?
আমরাই তো ভুলে গেছি,
নারী মানে একজন মানুষ,
তাকে শুধুই শরীর ভাবা মানে
তোমাকেই অপমান করা।

কান পাতো মা
কাশ্মীর এখন আর স্বপ্ন নয়,
সেখানে শিশুরা গুলি গুনে ঘুমায়,
আর সীমান্তে হিমে জমে যায়
একেকটা শহিদের চিঠি
যার শেষ শব্দ ছিল আ...দ
সে কখনও ফিরবে না,
তবু তোমার বুক খালি রাখো তার অপেক্ষায়।

তবু আমিত্ত
এক কবি,
তোমার ছোট্ট শিশুটি হয়ে যেতে চাই,
যে শুধু জানে কাঁদতে.
তোমার আঁচল টেনে বলে,
আ, আর কাঁদো না, আমি বাঁচাব তোমায়!দ
আমি একা নই মা-ত্ত
আমার মতো হাজারো আটকে পড়া তরুণ
আজও স্বপ্ন দেখে,
তারা হবে সেই নতুন সকালের দূত।

তারা বন্দী,
কিন্তু চিন্তায় মুক্ত,
তাদের চোখে আগুন-ত্তত্ত
না ধ্বংসের, বরং নবজাগরণের।
তারা প্রশ্ন করে,
তারা তৈরি করেত্তত্ত
তোমার জন্য এক নতুন ভোর!

NCC का जुनून

अलोरज्योति चौला (EE/23/09)

राष्ट्रीय कैडेट कोर का हमको गर्व है,
देशभक्ति का यह सर्वोत्तम पथ है।
वर्दी पहनते ही दिल धड़कता है,
तिरंगे के लिए कुछ कर दिखाने का जज़्बा जगता है।
सुबह की मार्च, क़दम से क़दम मिलाना,
अनुशासन और सम्मान को जीवन में लाना।
कदमताल, शारीरिक अभ्यास और प्रशिक्षण का आनंद अलग है,
हर पल में कुछ नया सीखने का रंग है।
शिविर की कहानी यादगार बन जाती है,
थकान के बाद भी मुस्कान छा जाती है।
सर्दियों में भी 4 बजे उठना पड़ता है,
पर देश के लिए कुछ भी करना पड़ता है।
रक्तदान हो या सफाई अभियान,
हर सेवा में है **राष्ट्रीय कैडेट कोर** की पहचान।
"एकता और अनुशासन" का संदेश लेकर,
हम हर कोने में रोशनी फैलाते जाएँ हर बार।
राष्ट्रीय कैडेट कोर ने हमें सिखाया है जीना,
हर मुश्किल को खुद पर लेना।
देश के लिए कुछ भी कर जाएँगे,
अगर ज़रूरत पड़ी — तो जान भी दे आएँगे।

जयहिंद!
NCC जिंदाबाद!

छलावा या सच?

इशिका गुप्ता (CSE/23/151)

छोटी हथेलियों में बंद थे कुछ सपने,
अंधेरे को चीरने की राह थी गहरी।
माँ की ममता, मासूमियत की छाया,
और आँखों में रौशनी की लकीरें ठहरी।
पाठशाला की देहरी पर पैर रखा,
तो किताबों में नई दुनिया बस गई।
दम्स मेरी की दृढ़ता ने रास्ता दिखाया,
हर अक्षर में संभालनाएँ सजी।
फिर सुना जब अंतरिक्ष में उड़ने का गीत,
कल्पना के साहस ने मन को झकझोर दिया।
गगन की ऊँचाइयों में खुद को देखा,
दस तारों की चमक में एक सपना बुन लिया।
पर समाज की हथकड़ियाँ कसती गईं,
मोहल्ले की सरहदें साँसें घोंटती रहीं।
नौ से छः की बंदिशों में जकड़ दिया उसे,
जहाँ उड़ान थी, वहाँ अब दीवारें खड़ी थीं।
लेकिन क्या सपने यूँ ही मर जाते हैं?
क्या आसमान समुंदर इतना दूर है?
उसकी आँखों की जिद अब भी जिंदा है,
अब भी उम्मीद की लौ भरपूर है।

छूटते लम्हे

- बर्नाली मिश्रा
(CSE/23/146)

क्यों तू पीछे मुड़ के देखे,
उन गलियों की राहें ताके।
सफ़र था जिसके साथ का,
अब बस साथ है अकेली रात का।
हर साथ अंत तक चले, यह ज़रूरी नहीं,
हर प्यार का अंजाम मिले, यह मुमकिन नहीं।
कुछ रिश्ते यूँ ही छूट जाते हैं,
एक पल में ही सदियाँ बीत जाते हैं।
उन यादों की पलकों तले,
पूरी ज़िंदगी का सहारा बने।
चल जाना तुम अपने,
चल दूँगी मैं अपने रास्ते।
सफ़र हमारा बस यहीं तक का था,
पर प्यार हमारा आबाद रहे।
कल मिलें अगर कहीं तुम मुझसे,
चल जाना... बस मुस्कुराएँ।

मैं क्या हूँ? मैं कौन हूँ?

विवेक गिरी (IT/23/20)

मैं क्या हूँ? मैं कौन हूँ?
क्या तुम्हारे भीतर चल रहे द्वंद का शोर हूँ,
या एक खूबसूरत सी सुबह का तिमिर (अंधेरा) रूपी भोर हूँ!

मैं क्या हूँ? मैं कौन हूँ?
हर क्षण एक नए रूप में बटते तुम्हारी कोशिकाओं का रूप हूँ,
या जैसे समझ नहीं पाते तुम दुनिया का छल,
मैं तुम्हारा वही स्वरूप हूँ !

क्या नई कर्ज हूँ किसी किसान का,
या मैं दर्ज हूँ किसी के उधारी के खाते में !

क्या मैं हूँ वो जो जिंदगी को सिर्फ ढाई दिन जिएगा,
या मैं वो हूँ जो आने वाले समय में देवताओं के बाद अमृत पियेगा!

मैं क्या हूँ? मैं कौन हूँ?
क्या मैं वो हूँ जिसका भाग्य उसे सोना दिलाएगा,
या वो हूँ जिसका भाग्य उसे एक चैन की नींद का भी मोहताज बनाएगा

क्या मैं वो हूँ जिसके भविष्य में काटें नहीं हैं,
या वो हूँ जिसके भविष्य में पैर खून से लाल होंगे!

मैं क्या हूँ? मैं कौन हूँ?
मैं जागता हूँ आधी रात और आधी सुबह के बीच
और सोचता हूँ कि कौन हूँ मैं?

दूर कही सन्नाटे को चीरते हुए एक आवाज आती है,
तुम, 'तुम' हो!
तुम 'मौन' हो !

माँ की ममता, पिता का संबल

~ प्राची कुमारी (CSE/23/153)

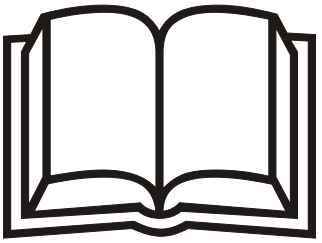
माँ की ममता, पिता का संबल,
बिन शब्दों के कह दें वे अंबल।
एक छाँव हैं धूप में चलती,
हर दुख को हँसकर वो निगलती।

नींदें बेचैं, सपने बाँटे,
बचपन की हर ठोकर काटें।
हाथ पकड़कर चलना सिखाएँ,
और खुद पीड़ा में मुस्काएँ।

वो EMI, वो फ़ीस, वो मेडिकल की पर्चीं,
कभी कोचिंग की फीस, कभी स्कूल का बस्ता,
उनके सपने नहीं, हमारी उड़ान ही उनका रस्ता।

सीख जो दी, वो जीवन की गहराई,
संस्कारों से रची एक परछाई।
तपस्वी जैसे जीवन बिताया,
हर चाहत में बस हमें ही पाया।

उनकी कहानियाँ किसी ग्रंथ में नहीं मिलतीं,
पर हर दिल की किताब में सुनाई देती हैं।
जो झुककर हमें उठाते हैं,
वो हमारे पहले भगवान होते हैं।



बचपन का शहर

- स्नेहा कुमारी (CSE/23/150)

धूप में छाँव सी थी हर एक बात,
गली-गली में घूमती थी मेरी रात।
कागज की कश्ती, मिट्टी के खिलौने,
हर मोड़ पे मिलते थे प्यारे बहाने।
रास्ते की धूल ने ढका मिला रास्ता,
पर दिल में अब भी रौशनी है रास्ते।
पलकों पे कुछ ख़्वाब अधूरे से थे,
पर उनमें भी एहसास पूरे से थे।
वो मुस्कानें, वो मोमबत्तियाँ,
दिल के कोने में छुपी कुछ तमन्नाएँ।
दिल से ले जाती हैं वो हाथों की लहरियाँ,
जहाँ हर कोना था मेरा अपना सा घर कहीं।
महीने बीत गए, साल ढल गए,
पर बचपन की मिट्टी के रंग कभी न धुंधले पड़े।

खुद से मुलाकात

स्नेहा यादव (CSE/23/138)

मैं अपने आप में काफी हूँ,
खुद से जोड़ी एक सच्चाई,
हर कमी, हर खामी में,
छुपी है मेरी खूबसूरती की परछाई

सपनों की ऊँचाई में,
मैंने खुद को पाया है,
हर संघर्ष, हर मुश्किल में,
मैंने खुद को सजाया है।

दूसरों की नजरों से नहीं,
मैंने खुद को समझा है,
जो हूँ, वो मैं हूँ,
इससे बड़ा कोई सपना नहीं।

खुद से प्यार करना सीखा,
हर दिन एक नई शुरुआत,
मैं अपने आप में काफी हूँ,
यह है मेरी सबसे बड़ी बात।

हर दिन की नई सुबह में,
मैं खुद को गले लगाती हूँ,
मैं अपने आप में काफी हूँ,
यह सच मैं हर पल गाती हूँ।

NCC India: देश सेवा की प्रेरणा

Santanu Samanta, (ECE/23/045)

NCC (National Cadet Corps) भारत का एक प्रमुख युवा संगठन है, जिसका उद्देश्य छात्रों में देशभक्ति, अनुशासन और नेतृत्व गुणों का विकास करना है। इसकी स्थापना 16 जुलाई 1948 को हुई थी, और तब से यह लाखों युवाओं को राष्ट्र निर्माण में योगदान देने के लिए प्रेरित कर रहा है।

NCC तीनों सेनाओं – थल, जल और वायु – के युवाओं के लिए एक संयुक्त प्रशिक्षण कार्यक्रम है। इसमें स्कूलों और कॉलेजों के छात्र-छात्राएँ भाग लेते हैं। NCC का मुख्य उद्देश्य युवाओं को सेना के प्रति रुचि दिलाना, उनमें आत्मविश्वास बढ़ाना, और उन्हें आपदा प्रबंधन, सामुदायिक सेवा तथा राष्ट्रीय एकता जैसे क्षेत्रों में सक्रिय भूमिका निभाने के लिए तैयार करना है।

NCC कैडेट्स को ड्रिल, शस्त्र प्रशिक्षण, मैप रीडिंग, फील्ड क्राफ्ट, पैराशूटिंग, ट्रेकिंग और कैंप्स के माध्यम से शारीरिक और मानसिक रूप से मज़बूत बनाया जाता है। इसके अलावा स्वच्छता अभियान, रक्तदान, वृक्षारोपण, सड़क सुरक्षा, महिला सशक्तिकरण जैसे सामाजिक कार्यों में भी उनकी भागीदारी होती है।

हर वर्ष आयोजित होने वाला *Republic Day Camp* और *Thal Sainik Camp* जैसे विशेष आयोजन NCC कैडेट्स के लिए बड़े गौरव का विषय होते हैं। इन कैंप्स में कैडेट्स न केवल देशभर से आते हैं, बल्कि उन्हें भारतीय संस्कृति और एकता का अनुभव भी होता है।

NCC "एकता और अनुशासन" (Unity and Discipline) के मूल मंत्र को आत्मसात करते हुए राष्ट्र को समर्पित एक सशक्त मंच है। यह युवाओं को जिम्मेदार नागरिक बनाने की दिशा में एक अहम भूमिका निभा रहा है। NCC का अनुभव न केवल करियर में सहायक होता है, बल्कि यह जीवन भर के लिए एक प्रेरणा बन जाता है।

आज जब भारत आत्मनिर्भर बनने की दिशा में आगे बढ़ रहा है, तब NCC जैसे संगठनों की भूमिका और भी महत्वपूर्ण हो जाती है। हर युवा को NCC से जुड़कर न सिर्फ अपने व्यक्तित्व को निखारने का अवसर मिलता है, बल्कि वे देश सेवा की राह में भी अग्रसर होते हैं।

– जय हिन्द, जय NCC!

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Disha Ghosh (CSE/23/163)

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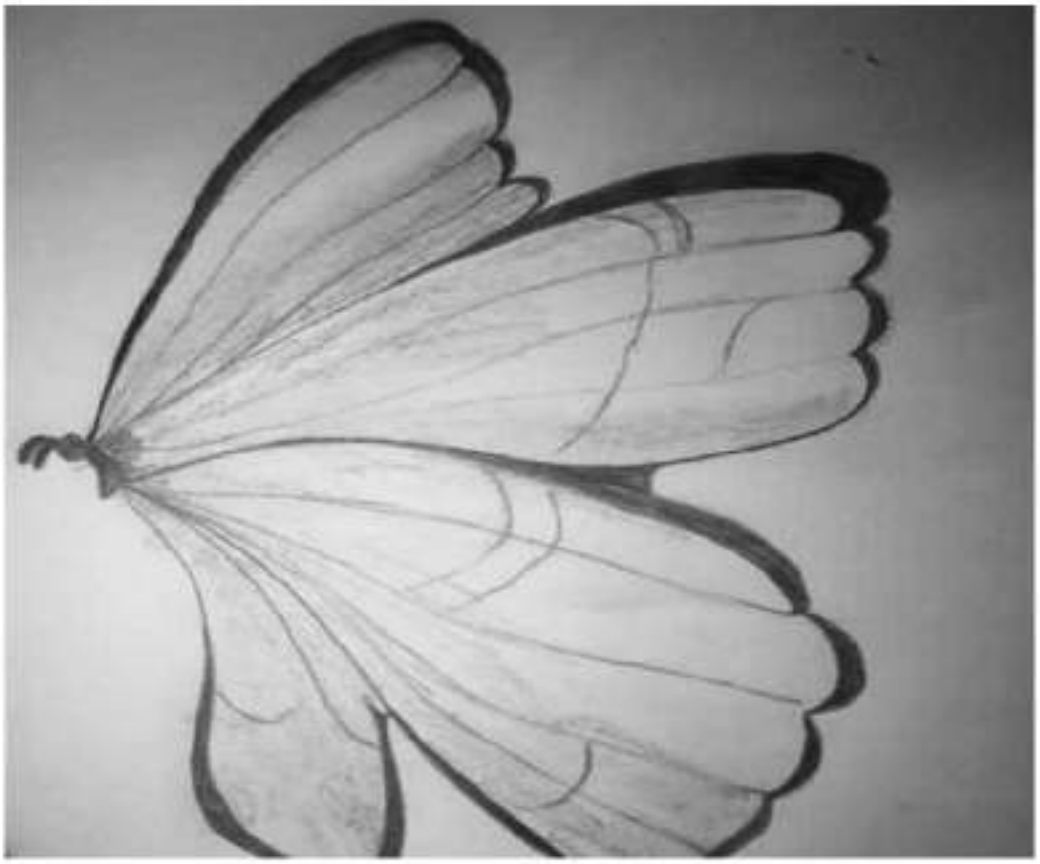

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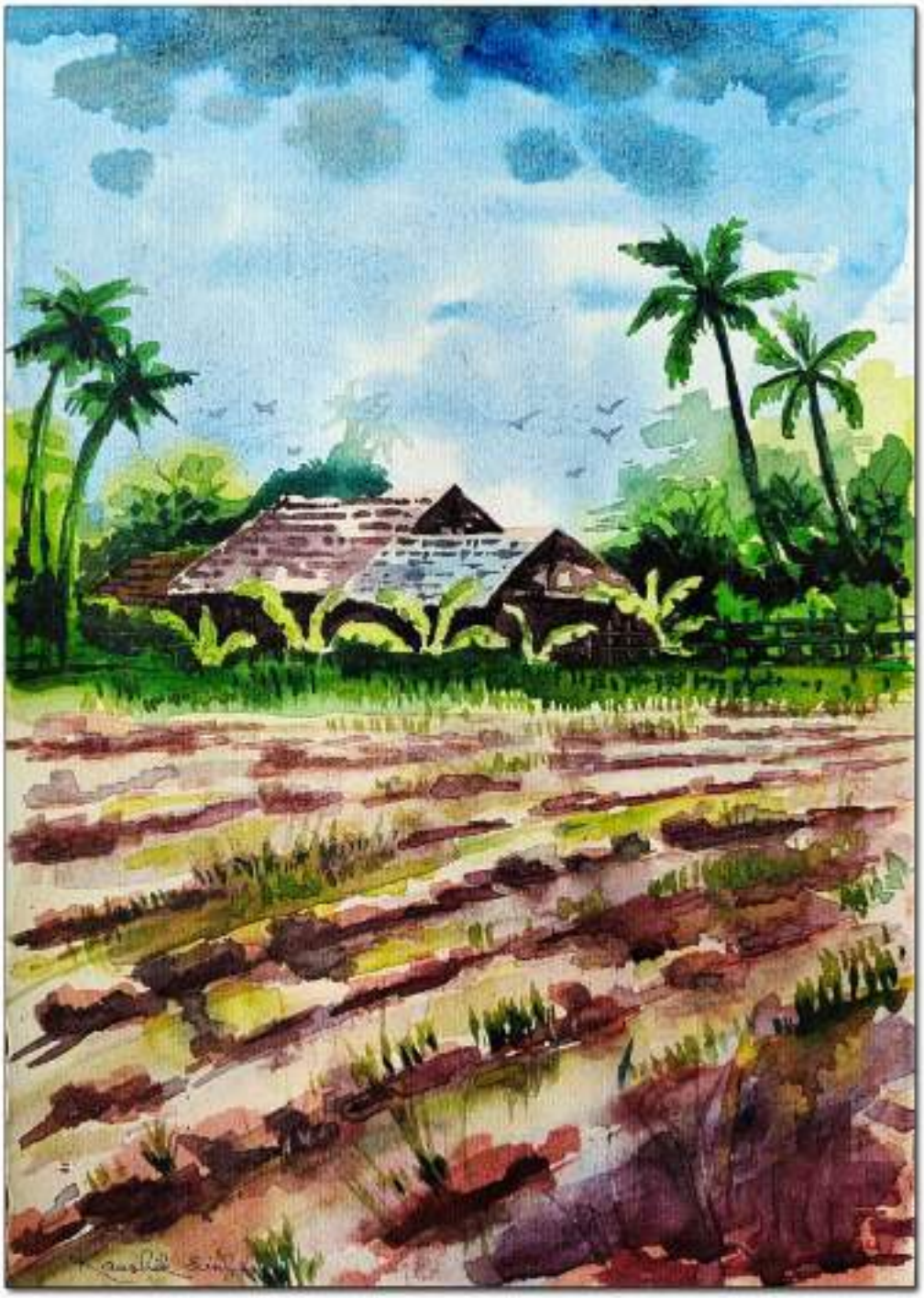

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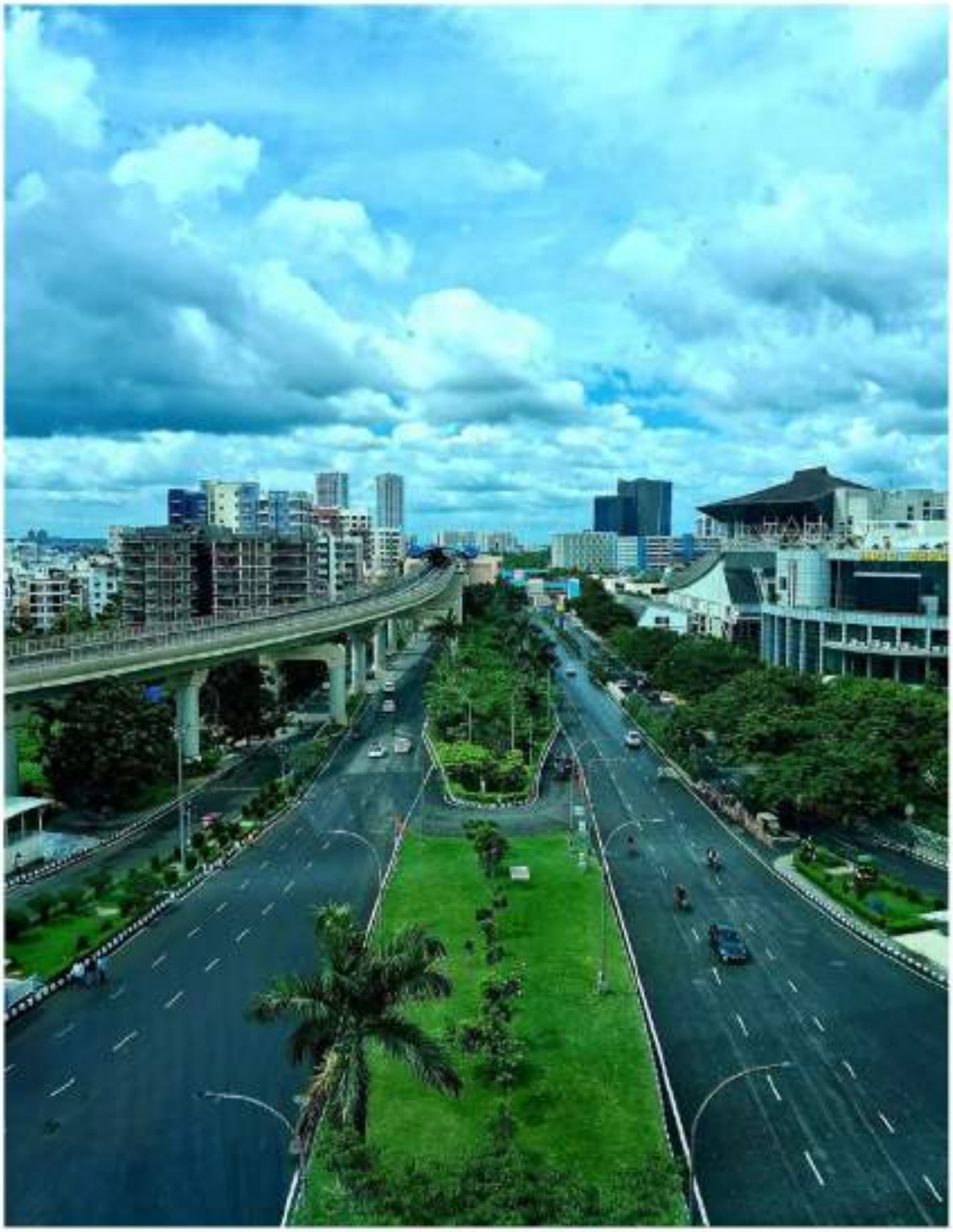

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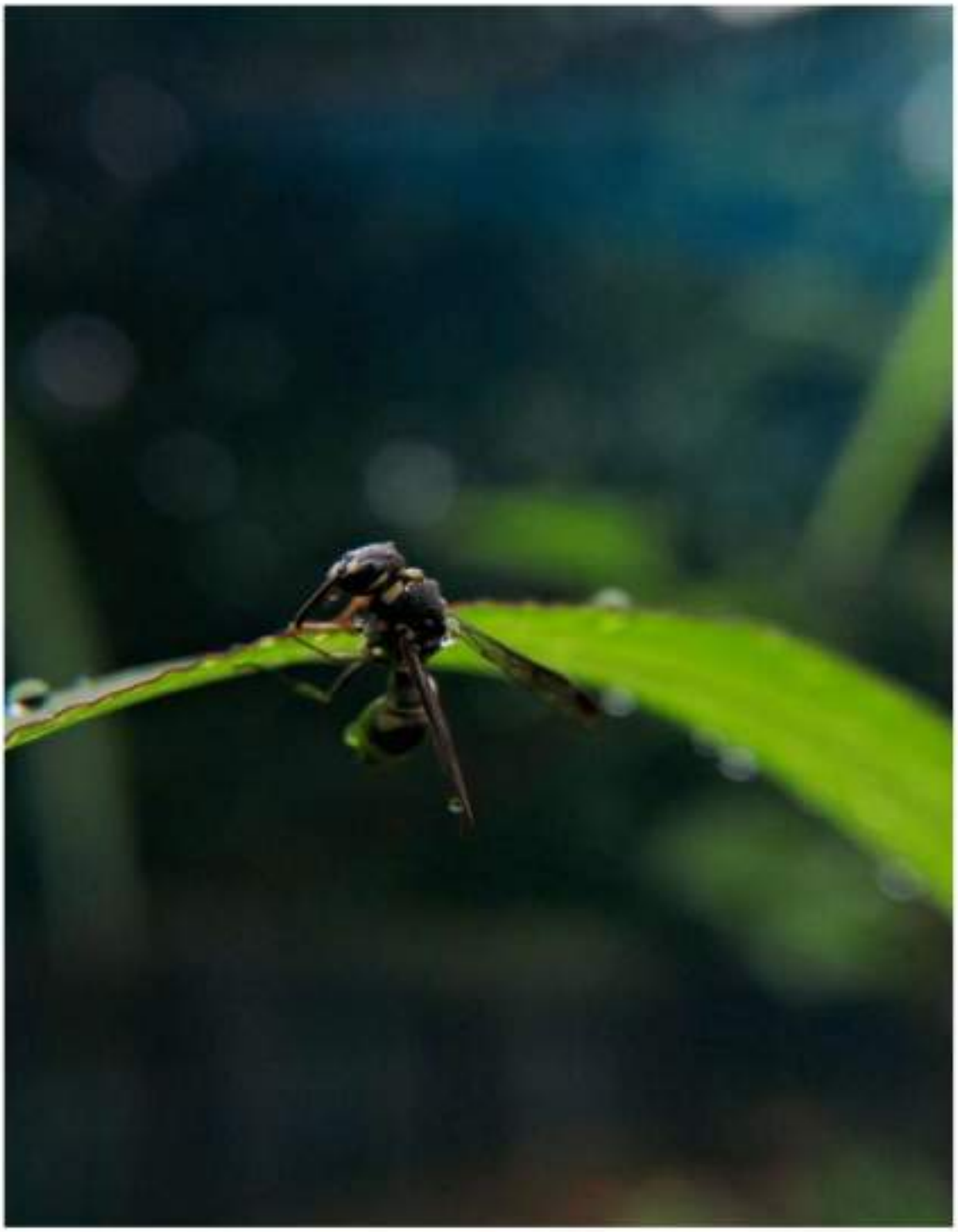

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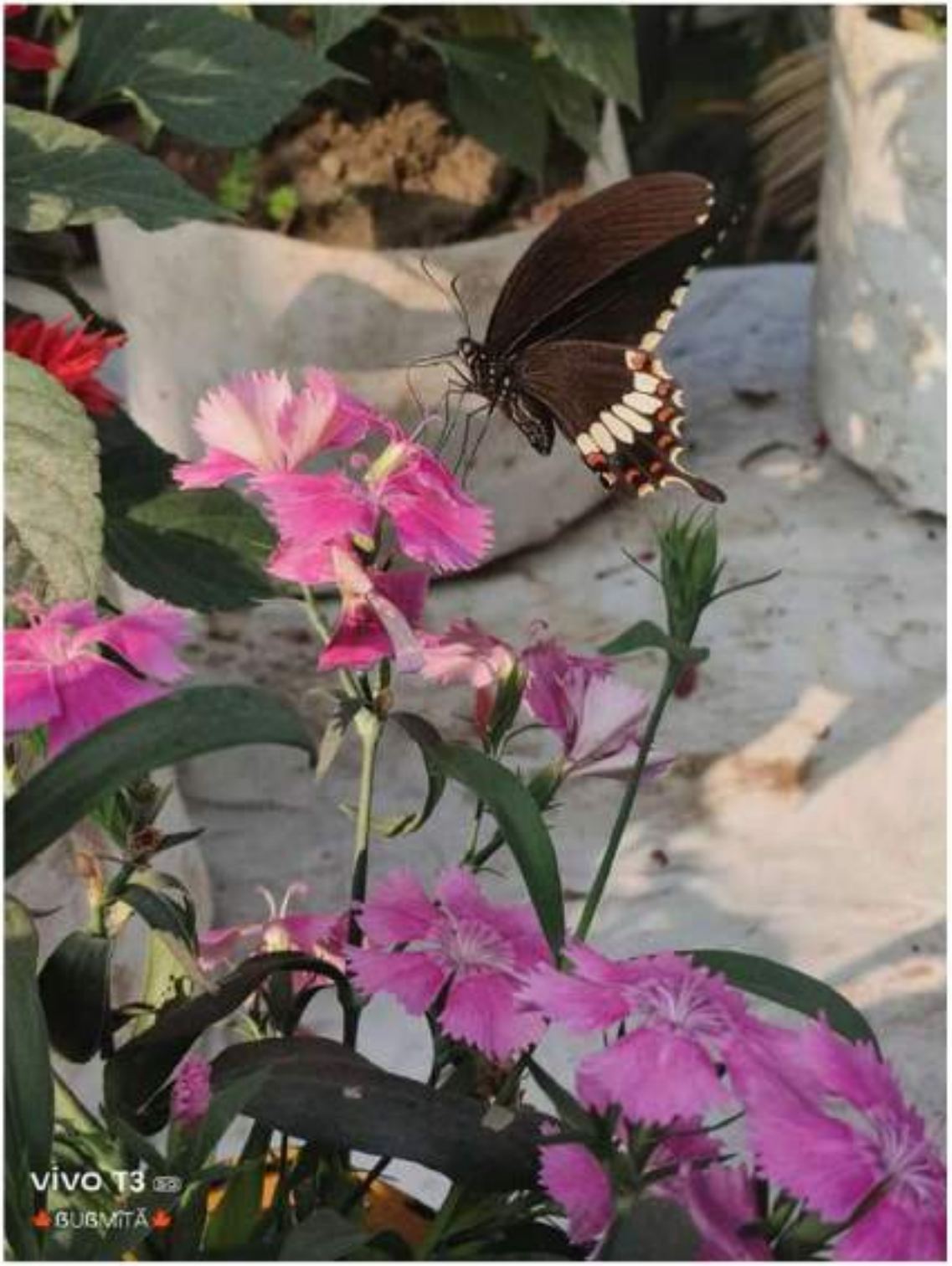

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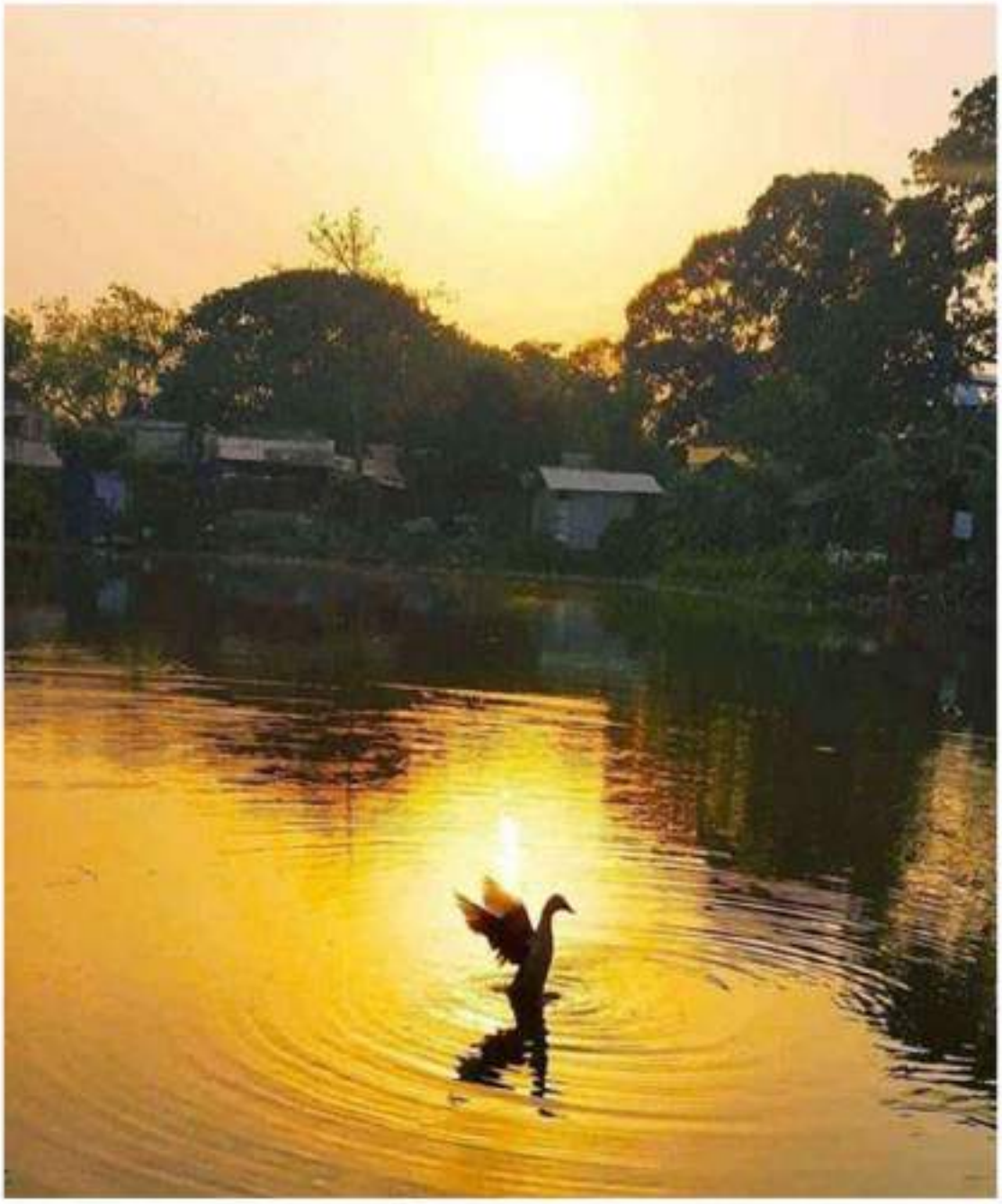

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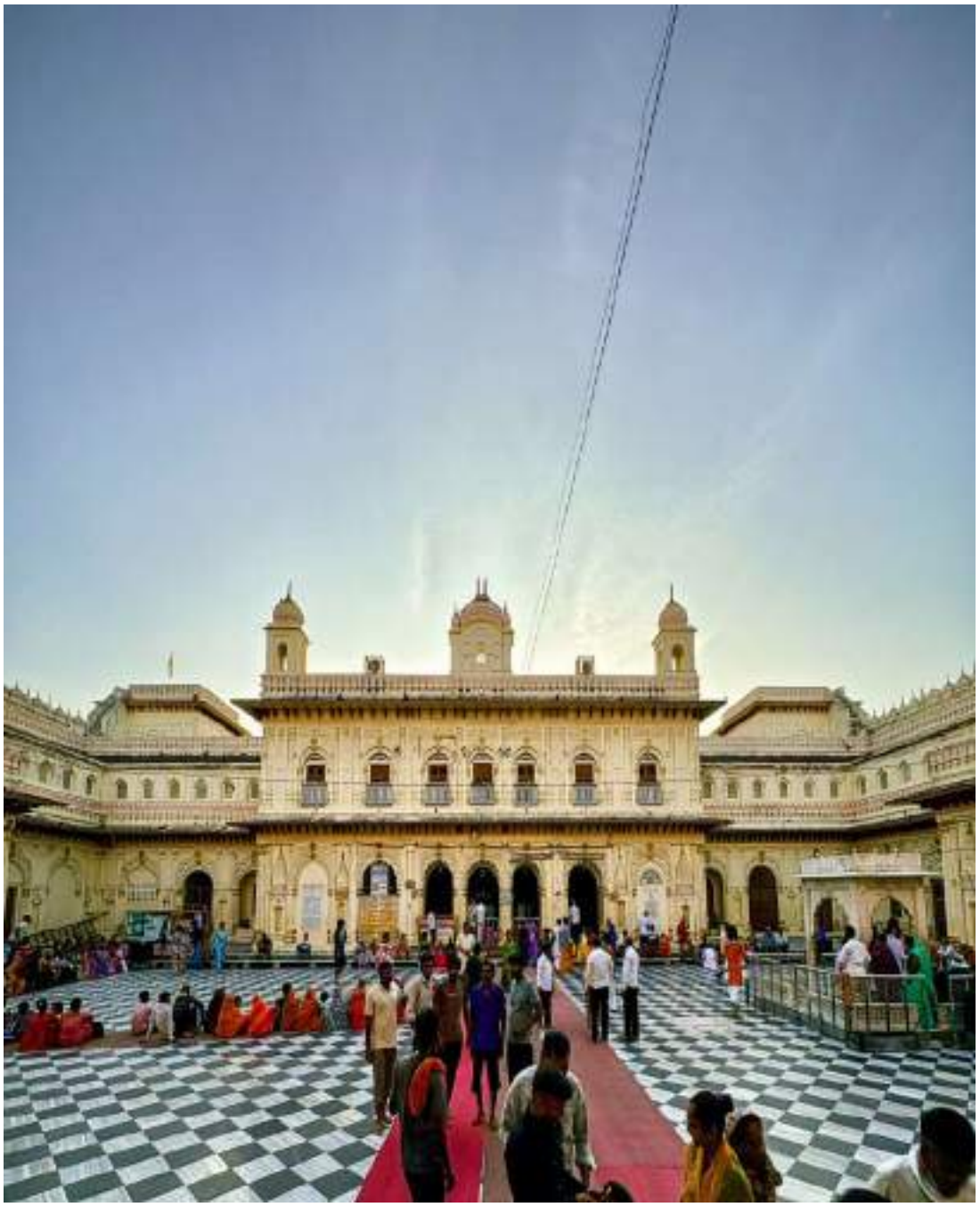

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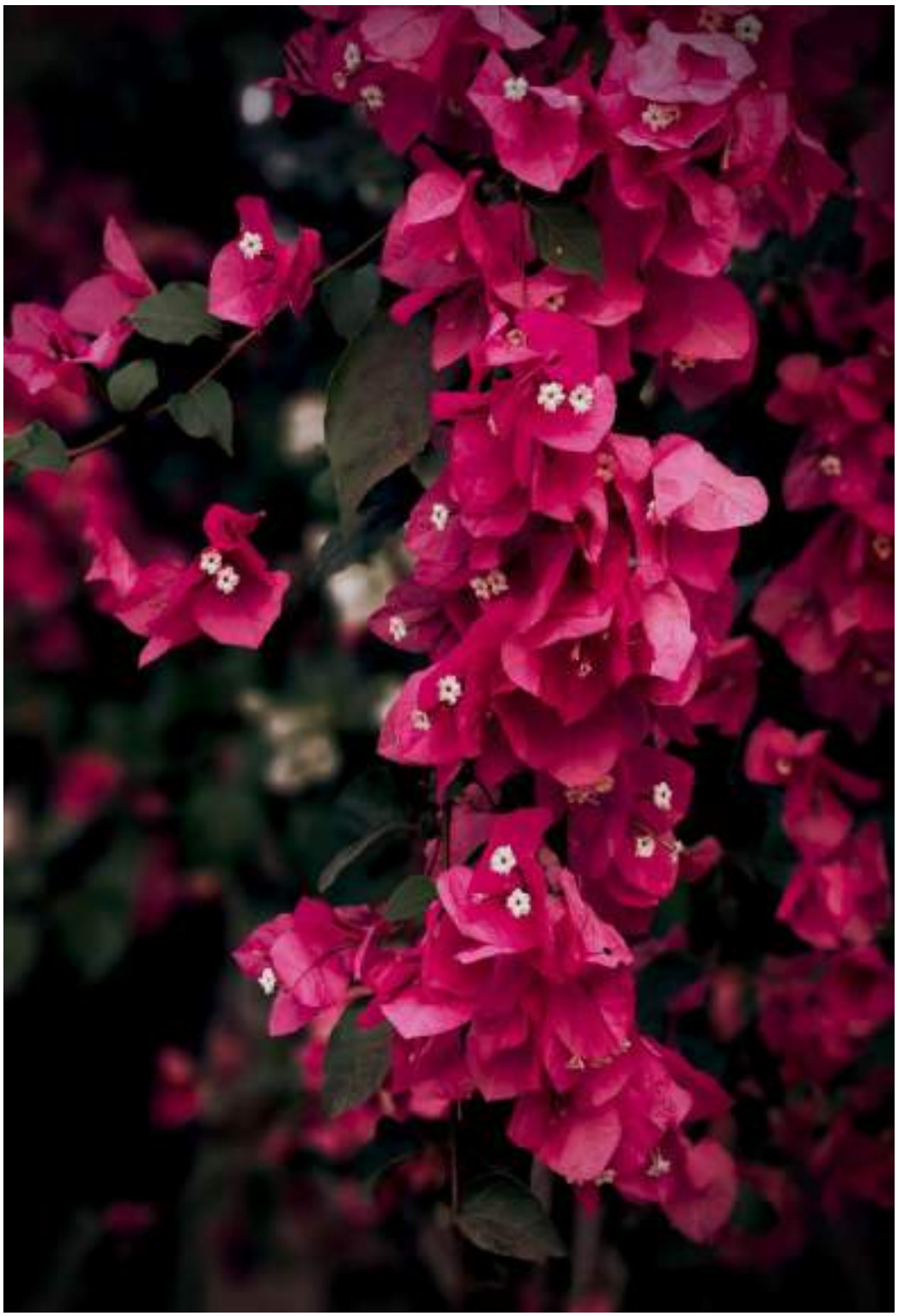

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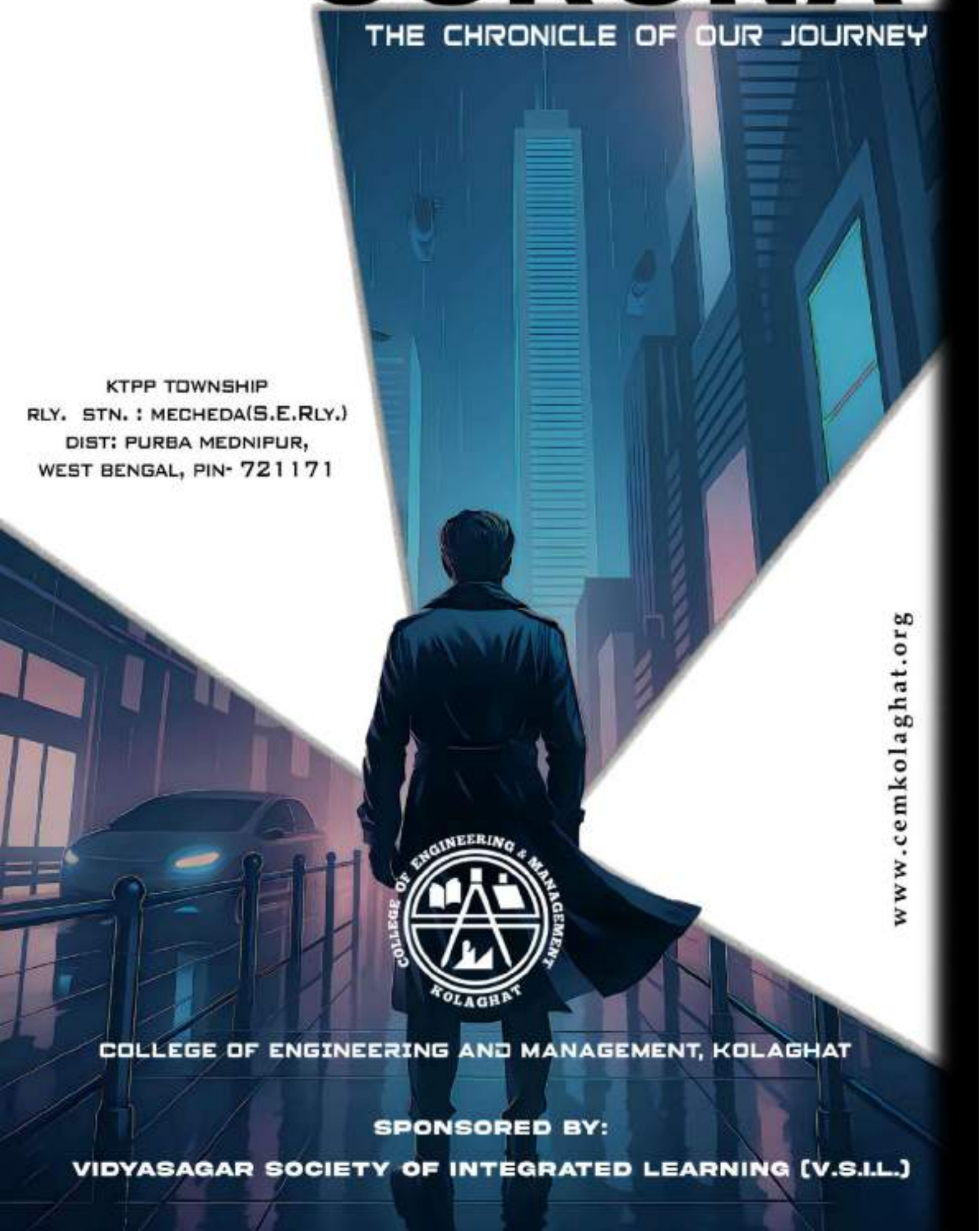

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