KALYANI GOVERNMENT ENGINEERING COLLEGE

# PRISMA 2.0



## 2025

DEPARTMENT of COMPUTER SCIENCE & ENGINEERING

## Annual Magazine



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**Dr.Sourabh Kumar Das**
Principal,

Kalyani Government
Engineering College

# Secretary



**Dr. Kousik Dasgupta**
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Computer Science &
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Mr. Kuntal Bhowmick

Mr. Pranab Ranjan Das

# From the Desk of President

Dear CSE Department,

It is with great pleasure that I extend my heartfelt greetings to the talented members of our Computer Science and Engineering family. As we embark on another academic journey, I am filled with pride and enthusiasm for the remarkable achievements and unwavering dedication that define our CSE department.

In the ever-evolving landscape of technology, our CSE department continues to be a beacon of excellence. Our students, faculty, and staff contribute tirelessly to the dynamic field of computer science, pushing boundaries and shaping the future. The collective brilliance within these walls is not only inspiring but also a testament to our commitment to fostering innovation, collaboration, and a relentless pursuit of knowledge.

I commend the initiative to showcase the department's achievements through this magazine, "Prisma 2.0". Let the pages within be a reflection of our shared journey, celebrating successes, acknowledging challenges, and highlighting the collective spirit that defines us. I encourage everyone to actively participate and contribute to making this edition a true representation of the outstanding work emanating from our CSE family.

Wishing you all a year filled with intellectual growth, innovative endeavors, and collaborative triumphs.

Best Regards,

Dr. Sourabh Kumar Das,
President,
Prisma 2.0,
Kalyani Government Engineering College.

# From the Desk of Secretary

It is my pleasure to interact with you all through the first endeavour of Computer Science and Engineering- Departmental Magazine “Prisma 2.0”. Department of Computer Science and Engineering was one of the first departments to be started with the establishment of the Institute. The department has grown over the years but is always young in the hearts. The students of the department desired to start their own departmental magazine - this gives birth to " Prisma 2.0"-the first departmental magazine. The magazine is a convergence of science & technology, সাহিত্যের মুক্তচিন্তা। wish that this trigger establishes to be a flint to fire the enthusiasm and excite their minds for many intrusive innovations among the students and inspire passion among all members of the department of CSE.

At this point I also want to thank all the esteemed Alumni of the department, for their help and contribution at different times in our journey.

My sincere thanks to The Principal, all H.O.Ds, The Registrar and the whole KGEC Family without their help this would not have been possible.

My greeting to the editorial board, students, faculty, teacher, and staff members of the CSE department to keep on doing the good work for the students, department, and society.

I hope all of you enjoy the Prisma 2.0

Best Regards,

Dr. Kousik Dasgupta,
Secretary,
Prisma 2.0
Kalyani Government Engineering College

# Committee Members

## 4th YEAR

Sayan Das
Devleena Das

## 3rd YEAR

Shouvick Singha Roy
Trisha Chakrabortty
Akash Biswas
Syamantak Pyne

## 2nd YEAR

Ayush Mondal
Anupam Mondal
Ishita Mukherjee
Maryada Tudu
Debayan Bhattacharya
Manab Biswas
Sayan Chatterjee
Md. Kaif Sardar

## 1st YEAR

Sayed Mosharaf Hossain
Kousiki Baral
Soujanya Mallick
Samiksha Bajoria
Shubhabrota Pal
Chayan Samanta
Swastik Baidya
Utsav Das

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# Technical Articles

# The Renewable Energy Revolution in India and Asia: Challenges and Opportunities

The transition to a clean energy economy is a pressing challenge that is particularly relevant for India and the broader Asian region. With rapid urbanization, population growth, and increasing energy demands, the reliance on fossil fuels poses significant risks to environmental sustainability, public health, and energy security. Renewable energy sources, including solar, wind, hydro, and biomass, offer promising alternatives that can help meet energy needs while mitigating the impacts of climate change. However, the widespread adoption of renewable energy in India and Asia is fraught with challenges and opportunities that require careful navigation.

**The Potential of Renewable Energy in India and Asia**

The potential for renewable energy in India and across Asia is vast. India, with its abundant sunlight and wind resources, is ideally positioned to become a global leader in renewable energy. The country has set an ambitious target to reach 500 gigawatts (GW) of renewable energy capacity by 2030, which includes a significant emphasis on solar and wind energy.

Solar energy is particularly promising in India, where average solar insolation is high. Initiatives such as the National Solar Mission aim to boost solar capacity, with large-scale solar farms being established in states like Rajasthan and Gujarat. Similarly, India has made significant investments in  and Maharashtra leading in wind farm installations.

In Asia, countries such as China and Japan are also making substantial strides in renewable energy. China is currently the world's largest producer of solar panels and wind turbines, investing heavily in these technologies. Japan, on the other hand, is focusing on solar energy following the Fukushima disaster, which has accelerated its transition to renewables.

**Challenges to Widespread Adoption**

Despite the considerable potential, several challenges hinder the widespread adoption of renewable energy in India and Asia. One of the foremost obstacles is the intermittent nature of renewable sources. Solar and wind energy generation is dependent on weather conditions, making it challenging to ensure a consistent supply of electricity. This intermittency complicates integration into existing power grids, which require a stable and reliable energy supply.

To address this issue, advancements in energy storage technologies are crucial. Battery storage systems, pumped hydro, and other storage solutions can help manage the supply and demand of renewable energy. However, the high costs associated with these technologies can be a significant barrier to implementation. In India, while battery prices have been declining, the overall investment in storage solutions remains limited.

Another challenge is the high upfront costs associated with installing renewable energy systems. Although the long-term cost savings of renewables are well-documented, the initial investment required for solar panels, wind turbines, and other technologies can be prohibitive for many individuals and businesses. This financial barrier is particularly acute in developing regions, where access to capital may be limited.

Additionally, the regulatory landscape can pose challenges to renewable energy deployment. In India, for instance, bureaucratic hurdles and complex regulatory requirements can delay project approvals and increase costs. Streamlining the permitting process and creating a more conducive regulatory environment are essential for accelerating the growth of renewable energy.

Social and political factors also play a critical role in the adoption of renewable energy. Public resistance to large-scale renewable projects, such as wind farms or solar plants, can stem from concerns about land use, environmental impacts, and potential displacement of communities. Engaging with local communities, addressing their concerns, and ensuring transparent decision-making processes are vital for gaining public support.

**The Role of Government Policies**

Government policies are instrumental in shaping the future of renewable energy in India and Asia. In India, the government has implemented various initiatives to promote renewable energy, such as the National Renewable Energy Policy and state-level policies that incentivize solar and wind energy projects. These policies provide financial incentives, including subsidies, tax exemptions, and feed-in tariffs, to encourage investments in renewable energy.

Furthermore, the Indian government has set up the Solar Energy Corporation of India (SECI) to facilitate the development of solar projects. SECI plays a critical role in bidding, procurement, and implementation, streamlining the process for project developers. Additionally, the introduction of renewable purchase obligations (RPOs) mandates that utilities purchase a certain percentage of their power from renewable sources, creating a stable demand for renewables.

(SECI) to facilitate the development of solar projects. SECI plays a critical role in bidding, procurement, and implementation, streamlining the process for project developers. Additionally, the introduction of renewable purchase obligations (RPOs) mandates that utilities purchase a certain percentage of their power from renewable sources, creating a stable demand for renewables.

In Asia, countries like China and Japan have also adopted supportive policies. China's Feed-in Tariff system has spurred massive investments in solar and wind projects, making the country a leader in renewable energy generation. Japan's commitment to renewable energy has led to the establishment of various incentives for solar power installations, including net metering programs that allow consumers to sell excess energy back to the grid.

**The Future of Renewable Energy in India and Asia**

The future of renewable energy in India and Asia is promising, driven by technological advancements, supportive government policies, and increasing public awareness of climate change. Technological innovations are making renewable energy systems more efficient and cost-effective. For instance, advancements in solar photovoltaic (PV) technologies, such as bifacial panels and tracking systems, enhance energy generation capabilities.

Moreover, the growing demand for electric vehicles (EVs) presents a unique opportunity for the renewable energy sector. As EV adoption increases, there is a corresponding need for clean electricity to power these vehicles. Integrating renewable energy sources into the transportation sector can significantly reduce greenhouse gas emissions and promote energy independence.

In India, the government is also focusing on promoting decentralized renewable energy systems, such as rooftop solar installations. By empowering individuals and communities to generate their own energy, the country can reduce reliance on centralized power grids and enhance energy security. This decentralized approach can also lead to job creation in local communities, as installation and maintenance of renewable systems require skilled labor.

**The Role of Technology in Renewable Energy**

Technological advancements have been pivotal in the growth of renewable energy in India and Asia. Solar panels have become more efficient, with conversion efficiencies exceeding 20% for many commercial products. Wind turbine designs have also evolved, resulting in larger turbines capable of generating more energy from lower wind speeds.

Energy storage technologies are witnessing rapid developments as well. Lithium-ion batteries, which are now widely used for residential and commercial energy storage, are becoming more affordable and efficient. Research into alternative battery technologies, such as sodium-ion and solid-state batteries, holds promise for further improvements in energy storage solutions.

Artificial intelligence (AI) and machine learning are increasingly being integrated into renewable energy systems to optimize performance and enhance grid management. AI algorithms can analyze data from weather patterns and energy demand to predict energy generation and consumption, facilitating more efficient integration of renewables into the grid.

**The Impact of Renewable Energy on Energy Security**

Transitioning to renewable energy can significantly improve energy security in India and Asia. By reducing dependence on imported fossil fuels, countries can enhance their energy independence and decrease vulnerability to geopolitical shocks. Renewable energy sources are inherently more distributed, reducing the likelihood that a single event can disrupt the entire energy system.

For India, energy security is a critical issue, given its reliance on coal and oil imports. By diversifying its energy mix and investing in renewables, India can mitigate the risks associated with volatile fossil fuel markets. The establishment of microgrids and decentralized energy systems further enhances resilience, allowing communities to generate and consume energy locally.

In Asia, countries like Japan and South Korea are also recognizing the importance of energy security. The transition to renewable energy can help these nations reduce their reliance on imported fossil fuels and bolster their energy independence. Additionally, regional cooperation on energy projects can foster greater energy security and stability.

**The Economic Benefits of Renewable Energy**

The renewable energy sector in India and Asia holds significant potential for job creation and economic growth. According to the International Renewable Energy Agency (IRENA), the renewable energy sector employed over 11 million people globally in 2018, and this number is expected to grow substantially in the coming years. In India alone, the solar and wind sectors are projected to create millions of jobs in manufacturing, installation, and maintenance.

Investing in renewable energy can also stimulate local economies. The construction and operation of renewable energy projects often require local labor and materials, benefiting communities economically. Additionally, the reduced costs associated with renewable energy can lead to lower energy bills for consumers, freeing up disposable income that can be reinvested in local businesses and services.

Furthermore, renewable energy projects can enhance energy access in rural areas, where traditional energy infrastructure may be lacking. Off-grid solar solutions, for example, can provide electricity to remote communities, improving quality of life and enabling economic activities such as small-scale manufacturing and agriculture.

**The Environmental Benefits of Renewable Energy**

The most significant advantage of renewable energy is its potential to mitigate climate change. By reducing greenhouse gas emissions, renewable energy can help stabilize the Earth's climate and prevent the worst impacts of global warming. For India, where air pollution and climate-related disasters are prevalent, transitioning to renewable energy sources is crucial for sustainable development.

In addition to reducing greenhouse gas emissions, renewable energy can improve air quality by decreasing pollution from fossil fuel power plants. This is especially important in urban areas, where air quality is often a significant public health concern. By reducing emissions of harmful pollutants, such as sulfur dioxide and nitrogen oxides, renewable energy can contribute to cleaner air and better health outcomes for communities.

Moreover, renewable energy sources typically require less water for operation compared to traditional fossil fuels. This is particularly relevant in water-scarce regions of India and of India and Asia. By reducing water consumption, renewable energy can help preserve vital water resources for agriculture and drinking water.

**The Role of International Cooperation**

International cooperation is essential to addressing the challenges and opportunities of renewable energy in India and Asia. Countries can collaborate to share knowledge, technology, and best practices, fostering a collective approach to transitioning to a clean energy future.

Regional initiatives, such as the Asia-Pacific Energy Research Centre, promote collaboration among Asian countries to enhance energy security and sustainability. These platforms facilitate the exchange of information on renewable energy technologies and policies, helping countries learn from each other's experiences.

International agreements, such as the Paris Agreement, provide a framework for global action on climate change and renewable energy. Countries are encouraged to set ambitious climate targets and collaborate on initiatives that promote clean

energy development. India, for example, has committed to increasing its renewable energy capacity as part of its climate pledges, demonstrating its commitment to international cooperation.

**The Future of Renewable Energy: A Call to Action**

The renewable energy revolution is underway in India and Asia, but much remains to be done. Governments, businesses, and individuals must work together to accelerate the transition to a clean energy economy. By investing in renewable energy, supporting sustainable policies, and promoting public awareness, we can create a brighter future for ourselves and future generations.

ourselves and future generations.

Individuals can advocate for renewable energy initiatives in their communities, supporting local projects and educating others about the benefits of clean energy. Businesses can invest in renewable energy solutions, adopt sustainable practices, and engage in corporate social responsibility initiatives that contribute to community development.

In conclusion, the transition to renewable energy is not only an environmental imperative; it is also an opportunity for economic growth, social equity, and energy security in India and Asia. By harnessing the potential of renewable energy and addressing the challenges we face, we can build a sustainable future that benefits both people and the planet. The renewable energy revolution is not just about technology; it is about transforming societies, creating jobs, and ensuring a livable world for future generations.

**-Jay Kumar Lal, 2nd Year, CSE**

# The Transformative Role of Artificial Intelligence in Advancing Computer Science and Engineering

The emergence of Artificial Intelligence (AI) as a dominant force in Computer Science and Engineering (CSE) marks a significant paradigm shift across diverse subfields, including software engineering, big data analytics, cybersecurity, and autonomous systems. This paper delves into the scientific advancements AI has enabled, focusing on algorithmic innovations, performance improvements, and the integration of AI into core CSE methodologies. The discussion emphasizes the theoretical underpinnings of AI applications and their practical implications for future research and development.

## 1. Introduction

Artificial Intelligence (AI) has rapidly transitioned from a specialized area of research to a foundational element of Computer Science and Engineering (CSE). The convergence of AI with traditional CSE fields—such as algorithms, data structures, and systems engineering—has created new opportunities for solving complex problems that were previously intractable. This paper explores the depth of AI's influence on various facets of CSE, emphasizing the critical role of machine learning, deep learning, and reinforcement learning algorithms in enhancing computational processes and enabling new research trajectories.

## 2. AI in Software Engineering: Toward Automated and Adaptive Systems

AI has initiated a new era in software engineering, focusing on automating traditionally manual processes, thereby improving development efficiency and software quality. At the core of this transformation are AI-driven tools that leverage natural language processing (NLP) and large-scale machine learning models to assist in code generation and error detection. For example, GitHub Copilot and similar AI-based tools utilize transformer-based architectures to predict and suggest code segments, improving the productivity of software engineers by reducing repetitive tasks.

Beyond code assistance, AI has proven effective in dynamic bug detection and automated testing. AI-powered systems can analyse historical bug data, allowing the identification of potential vulnerabilities during the coding process. Research in evolutionary algorithms and reinforcement learning has advanced adaptive software testing, where test cases evolve based on real-time system feedback, thus enabling more resilient software systems. Furthermore, AI optimizes software maintenance, allowing for real-time performance monitoring and automated refactoring, thereby reducing technical debt in large-scale systems.

### 3. AI in Big Data Analytics: The Confluence of Scale, Complexity, and Precision

The explosion of big data has necessitated the development of sophisticated AI algorithms capable of processing and analysing vast, high-dimensional datasets. Deep learning models, particularly those based on convolutional neural networks (CNNs) and recurrent neural networks (RNNs), have become critical in extracting meaningful patterns from unstructured data sources such as images, text, and time series data.

One of the most significant advancements in AI for big data analytics is the development of generative models, including Generative Adversarial Networks (GANs) and Variational Autoencoders (VAEs). These models facilitate unsupervised learning from large datasets, enabling the synthesis of new data points, anomaly detection, and dimensionality reduction without extensive labeled data. In addition, reinforcement learning algorithms have been effectively applied to decision-making processes in real-time, where AI systems must optimize complex systems such as supply chains, healthcare diagnostics, and financial forecasting.

From a theoretical perspective, the integration of AI into big data analytics introduces new challenges related to scalability, interpretability, and computational complexity. Researchers are exploring novel techniques such as sparse learning and quantum-inspired algorithms to handle these challenges, offering future pathways for more efficient big data analytics.

### 4. AI in Cybersecurity: Intelligent Defense Mechanisms

AI's application in cybersecurity represents a critical advancement in defending against increasingly sophisticated cyberattacks. Traditional cybersecurity measures rely heavily on rule-based systems and signature detection, which are limited in their ability to detect zero-day vulnerabilities or adaptive threats. AI, particularly machine learning and deep learning models, enhances cybersecurity by employing anomaly detection and pattern recognition to identify potential breaches in real time.

Recent developments in unsupervised learning algorithms, such as clustering and autoencoders, have enabled AI systems to detect subtle deviations in network traffic and user behaviour, flagging anomalies that may indicate an intrusion. Supervised learning models, such as support vector machines (SVMs) and decision trees, have been refined for predictive analysis, forecasting attack vectors based on historical data. This predictive capability allows organizations to implement preemptive measures, significantly reducing response times and minimizing damage.

Furthermore, AI-based systems are increasingly used in cryptography. Quantum-resistant algorithms, enhanced by AI, are being explored as future solutions to safeguard communications against the anticipated threats posed by quantum computing. This cross-disciplinary research is critical in fortifying cryptographic protocols and ensuring the security of data in transit.

### 5. AI in Autonomous Systems: Toward Fully Autonomous and Cognitive Machines

The field of autonomous systems, particularly in robotics and self-driving vehicles, has seen a dramatic transformation due to advances in AI. Central to these developments are deep learning models for perception, decision-making, and control systems. AI-driven systems enable robots and autonomous vehicles to interpret complex environments, make real-time decisions, and learn from their interactions. In robotics, the integration of AI with sensor fusion techniques, such as simultaneous localization and mapping (SLAM), has

sensor fusion techniques, such as simultaneous localization and mapping (SLAM), has improved the accuracy and robustness of autonomous navigation in dynamic, unstructured environments. Reinforcement learning algorithms further enable robots to adapt to novel tasks by optimizing their decision policies through trial and error, an approach seen in robotic manipulation and industrial automation.

For self-driving technologies, AI plays a crucial role in perception through computer vision systems that process vast amounts of data from cameras, lidar, and radar sensors. Deep learning models, especially convolutional neural networks, are employed for real-time object detection, lane recognition, and obstacle avoidance. Coupled with reinforcement learning strategies, these models allow vehicles to make split-second decisions, significantly improving safety and operational efficiency.

**6. Conclusion**

AI's integration into Computer Science and Engineering is not only reshaping existing paradigms but is also catalysing entirely new directions in research and development. Theoretical advancements in machine learning, coupled with their practical applications, are pushing the boundaries of what can be achieved in software engineering, big data analytics, cybersecurity, and autonomous systems. As AI technologies continue to evolve, their impact on CSE will deepen, leading to breakthroughs that were previously considered impossible.

For researchers, the challenge lies in addressing the limitations of current AI methodologies, particularly concerning issues of scalability, interpretability, and ethical considerations. As AI matures, interdisciplinary collaboration between AI experts, computer scientists, and engineers will be critical in shaping the future of systems are both efficient and aligned with technology, ensuring that AI-driven systems are both efficient and aligned with societal needs.

**-Anupam Mondal, 2nd Year, CSE**

# The Rise of AI in Everyday Life: Transforming Industries and Daily Routines

In recent years, artificial intelligence (AI) has evolved from a niche technological concept into a pervasive force reshaping industries and influencing daily life. From healthcare to finance, AI systems are revolutionizing how we work, communicate, and solve complex problems. This essay explores the multifaceted impact of AI, examining its applications, challenges, and future potential.

**Applications of AI**

One of the most significant advancements of AI is its ability to analyze vast amounts of data quickly and accurately. In healthcare, AI algorithms assist in diagnosing diseases by evaluating medical images and patient histories. For instance, AI-driven tools can detect early signs of conditions such as cancer, significantly improving treatment outcomes. The integration of AI in telemedicine also enhances patient care, allowing remote consultations and personalized treatment plans.

In the financial sector, AI is transforming risk assessment and fraud detection. Machine learning models analyze transaction patterns to identify anomalies, helping institutions mitigate potential losses. Robo-advisors are also gaining traction, offering personalized investment advice based on individual risk profiles and market conditions, democratizing access to financial planning. Retail is another area where AI is making strides. E-commerce platforms utilize AI algorithms to provide personalized recommendations, enhancing the shopping experience. Inventory management systems powered by AI optimize stock levels and supply chain operations, reducing waste andimproving efficiency.

**Challenges of AI Integration**

Despite its benefits, the widespread adoption of AI presents several challenges. Data privacy and security are paramount concerns, as AI systems often require access to sensitive personal information. Striking a balance between innovation and privacy remains a critical issue for policymakers and tech companies.

Additionally, the rise of AI raises ethical considerations regarding job displacement. Automation of routine tasks may lead to workforce reductions, necessitating a focus on retraining and upskilling programs to prepare workers for new roles in an AI-driven economy. This transition requires collaboration between governments, educational institutions, and businesses to ensure a smooth adaptation to changing job markets.

**Future Potential**

Looking ahead, the future of AI appears promising. Advancements in natural language processing (NLP) are enabling more intuitive human-computer interactions. Virtual assistants are becoming increasingly sophisticated, capable of understanding context and providing more accurate responses. This evolution could revolutionize customer service and support functions across various industries. Moreover, the convergence of AI with other

Moreover, the convergence of AI with other emerging technologies, such as the Internet of Things (IoT) and blockchain, offers exciting possibilities. Smart homes equipped with AI can learn user preferences and automate daily tasks, while AI-driven blockchain systems can enhance security and transparency in transactions.

**Conclusion**

As AI continues to integrate into various facets of life, its transformative potential cannot be overstated. While challenges exist, the benefits—ranging from improved efficiency to enhanced decision-making—underscore the importance of embracing this technology. By addressing ethical concerns and prioritizing responsible implementation, society can harness AI to foster innovation and improve quality of life, paving the way for a more connected and intelligent future.

**-Sayandeep Saha, 1st Year, CSE**

# Understanding Machine Learning Algorithms

**Machine learning (ML)** is a subset of artificial intelligence that enables systems to learn from data and improve their performance over time without being explicitly programmed. Key algorithms include supervised learning, unsupervised learning, and reinforcement learning.

Supervised learning uses labeled datasets to train models, with algorithms like linear regression and decision trees. This approach is effective for tasks such as classification and regression. Unsupervised learning, on the other hand, deals with unlabeled data, employing techniques like clustering and dimensionality reduction to identify patterns and structures.

Reinforcement learning focuses on training agents through trial and error, optimizing for long-term rewards in dynamic environments.
Selecting the appropriate algorithm depends on the problem context, data characteristics, and desired outcomes. Understanding these foundational concepts is crucial for implementing effective machine learning solutions across various applications, from image recognition to natural language processing.

**-Sayandeep Saha, 1st Year, CSE**

# Stories

# The Rising




-Arpan Biswas, 1st Year, CSE

The burning Sun shines over the Horizon and burns desperately still providing us will all the hope that we require. When the destiny is predefined, let us gain what we desire. Among all the beings that the Almighty has ever created or will ever thrive to create, we human beings are His best part of creation. And among all the humans that walk this holy planet, we Indians are His most blessed race. A race that has existed ever since the Eternity, a race that is dear to the land of our dear Gods and the culture so rich that has ever thrived the very passion that the life itself can illuminate. Today in this age when the entire world foresees us with hope, let us unite under one vale, The vale of rich cultural thoughts and traditional beliefs. Let us gather together into one string of infinite bliss and struggle, to get through the pains that our ancestors have gone through. Let our fire that has been resting since a millennium, be ignited once again, Let us rise, breaking through the barriers of untouchability, racism and caste discrimination.

We gave science to the world. Our sages were the greatest scientists ever. Tulshidas had already calculated the distance between the Sun and Earth hundreds of years before the west discovered it. Today's scientists are trying to discover those concepts which had been discovered, many years ago by our great sages. Since thousands of years Kedarnath temple stands so firm as well and stable without any hint of damage even after being struck by intense disasters like earthquakes, floods, avalanches, and landslides.



-Syamantak Pyne, 3rd Year, CSE

Concept of Live telecast mentioned in Mahabharata, or the use of Nuclear weapons in the form of brahmashtra, brahmashira astra & pashupatastra during the Kurukshetra war or the mention of

advanced biotechnology in the form of head transplant of Lord Ganesha are some of the stunning proof of a highly advanced society in ancient India.
The invaders who attacked our rich nation, then renowned as “Sone ki chiriya”, looted us and our wealth, that’s indeed a huge loss for us. But what is more annoying and heart breaking is that they looted our technology and many preffered to destroy the discoveries and inventions that our scientists had made. For instance, the huge stretching Nalanda University was brutally burnt by the Invader Bakhityar Khilji. Our sacred manuscripts- a storehouse of priceless vedic knowledge kept burning for 9 long months. For a thousand years, Millions of Indians were brutally massacred, out of fear millions had to convert their religion, millions of women cruelly raped, thrown out of their homes and a million found death better than torture. New ages would come and old ages would shed away, but the soul of those painful moments that pierced like daggers into the heart of our motherland shall remain. And what shall always remain is a shameful period of oppression and colonization.
Millions protested, Millions gave up their lives in the battlefield. Shivaji, Shambhaji, Maharana Pratap, Netaji Subhas Chandra Bose, Maharaja Prithviraj Chauhan and all those great warriors who devoted their entire lives to serve our Motherland.
What is lost, can not be regained. But we can still thrive to gain a postion that we deserve to get.

**-Utsa Das, 2nd Year, CSE**



**-Syamantak Pyne, 3rd Year, CSE**

# 2072 - The Future of Humanity

It is the year of 2072. Humanity has advanced tremendously in the field of science and technology over the past few decades.

Each and every country in the world has become a developed nation and each one of them has the facilities which were once only available in "modern" cities five decades ago. Humans have invented the technology to infuse computer chips into them and become what was a science fiction of the past, Cyborgs. This fusion has resulted in humans becoming immortal beings as all of their memories are constantly uploaded in the internet and governments protect the data at all costs from cyber threats. So, even after the death of the physical body, a human can continue to be alive on the internet. Flying cars went from being a dream to a reality. Each and every individual owns his/her private flying car and the best part is that these cars are driverless, meaning they work without drivers. A neural network brain, situated at the capital of every country controls the network by which the driverless flying cars work in co-ordination. NASA, in collaboration with other space agencies will start the project for construction of a "Dyson Sphere" around the sun that would allow us to harness entire energy of the sun and manipulate it for our uses. Threats from pollution and global warming have been eradicated.

But, like all things in the world, these technological marvels come at a cost. Humans no longer spend their time together with family and friends and are always busy in their virtual world. Only the old remember the jolly times they spent with their friends, while the newer generation is unaware of these joys.

-Md. Ceezan Ahmed, 1st Year, CSE



-Shouvick Singha Roy, 3rd Year, CSE

# Poems

# It'S Okay Not To Be Okay

Time comes when you feel bad
Worse, to be fair
When you feel depressed
Of failing, all whom you love.

Time comes when you think
And curse yourself as a failure
But you know you have to fight
And stand upright for all whom you love.

Time comes when you realize
You have to stay strong, no matter what,
Even when your heart weeps silent tears
You have to be bold for all whom you love.

Time comes when you wish to pay back
For all they did for you...
As you want to be desperate to win back
What you lost for all whom you love.

Time comes when you wish
Someone would say to you:
"My Dear! It's okay to fear or to be frail...
To not pretend to be okay...
Just stand straight with chin up
With your head held high
And show them all who you really are
For all whom you love."

In a time like this, I wish to tell
Everyone: When you think you're a hopeless one,
A waste to Our Mother Earth,
"Don't be reckless till you know yourself
For you're far better than you think.
Try your best till you are proud
Until you make it up one day...
Best of luck!"

**-Supriti Barua, 1st Year, CSE**

# The Silent Scream

She silently walked down the dark streets,
Following the quiet moonlight,
Smiling an innocent smile,
With wild teary eyes –
Resting beneath her silent yet violent pain.

The swift winds seemed to whisper cold refusals,
Even the moonlight seemed to threaten her with a blank cold stare
She felt the darkness embracing her with an evil laughter –
The silence seemed so load to her ears.

She was tired of being an eccedentesiast;
Still, she kept on moving
With the help of her broken yet crystal pure heart,
Dragging her legs hard with her loving soul...

She kept on moving –
Ignoring the sears and the grey shadows...
Starving yet surviving...
Challenging all her mental toughness, bewildering thoughts...

And –
Still she smiles all the time...
Still she laughs out loud...
Still she's capable of loving you the most...

**-Supriti Barua, 1st Year, CSE**



-Supriti Barua, 1st Year, CSE

Phone addiction is severely impacting the youth, leading to increased anxiety, depression, and poor academic performance. It is disrupting sleep patterns, causing physical health issues like eye strain, and hindering social skills development. The constant need to stay connected online is fostering addictive behaviours, making it challenging to engage in real-life interactions and often promoting selfishness, as individuals prioritise virtual connections over real-life relationships and responsibilities. In this context, here is a short poem from my side:

কষ্ট দুঃখ সবই বৃথা
কেউ রাখবেনা মনে
তুমি যাদের আপন ভাব
তারা ব্যাস্ত তাদের ফোনে

-Dwaipayan Datta, 1st Year, CSE



-Diganata Pal, 1st year, CSE



-Anwesha Tudu, 1st year, CSE

# Festive

The air is heavy with anticipation,
Life unrelenting and unforgiving;
The tone is set-
Here comes the Pujo, out you get!

Notwithstanding its bated relief,
Be measured in your Drip;
Play well your part for the society to heave,
For there are folk with but much to grieve.

-Aayudh Chatterjee, 1st Year, CSE

# The Soil



-Utsa Das, 2nd Year, CSE

The irresistible desires,
The pure showers of pride,
The diffused fragrance of the soil,
Wet with those drops,
That dissolves us in her madness,
And nourishes our soul like a Mother,
She enlightens us, uplifts our spirit,
And gives us a true sense of belonging.

The small grasses, the tiny herbs, shrubs and trees,
Too enjoy the essence of their wet land,
The leaves laugh at the sprinkles from the heaven,
They gain immortality and dance out of the pleasure...
The pure drops of Amrit, which creates cute puddles
That reflect our excitement and overpouring joy.

The insects which thrive on the greenery,
Get Filled up with enthusiasm and sing along...
The Melody of our hearts, the feeling of
Such beauty and our Pleasant connection
Resonates with the Harmony of the Universe!

-Utsa Das, 2nd Year, CSE

A little glow in the reign of green,
Born a new fellow with a lot of dreams.
Someone different, someone new-
No one understood what to do.
Lone and dull while surrounded by many,
The breezes were the only ones
Carrying her symphony.

A growing beauty, shining day by day,
Yet still lonely, with no one to say.
Crossed upon me on a busy day-
Her lone beauty caught my eyes,
That moment brought a sweet surprise.
My visits became frequent along my track;
No longer alone, her growth found a better path.

Since then, many seasons passed,
Her growth came to a halt at last.
On a visit in the break of dawn,
Singing in the spring breeze, serene,
Purple petals amidst the lashes of green,
Covered by the soft mist of spring,
Glistening in the sunshine,
I found the most beautiful flower
I have ever seen.

-Durgeshwar Kumar Shaw, 2nd Year , CSE




-Diganta Pal, 1st Year, CSE

# Restoration

My eyes grow heavy, almost shutting.
But it's not life that brings the horror.
It's the monsters that come in my dreams,
Those who are the product of my errors,
Shadows of mistakes, echoing in the dark.

I hear them close,
They speak, turning their problems into mine.
I care for their mental weight,
As my own mind unravel, vine by vine.

The vines was forced into my soil,
Draining what was once fertile land.
Land where dreams could of grown,
And desires unfulfilled could have blossomed.

They took the fruit and the wood,
Leaving the land empty, indifferent.
They didn't even pull up their roots—
Just moved on, building new homes elsewhere,
Golden palaces that could have been mine,
If I hadn't plant those vines.

I'm tired now. I'll sleep soon.
But first, a few more roots to pull.
A year more to clear the soil,
To sow the seeds of my own dreams.

The land will heal,
Big trees—my trees—will grow here.
They will stand tall,
The fruit will feed the wanderers,
Or offer something to the birds.

The land may not feel full again,
But it will never be barren.
I'll always welcome wanderers in my mind,
Though no soul will tread where shadows linger,
For that space is woven with whispers,
Echoes of a past that shade the soil,
Filling the air with what once was.

Now, I'll rest.
I have seeds to sow.

-Debjit Kundu, 2nd Year, CSE

# Ekushe Aain

## -Sukumar Roy

## The Rule of one plus Twenty (Translation)

In Shiva's country,
For his rules, everybody is panicky!
If on the ground someone slips
Coming there the soldier grips
Judged by the kajy
The fine is one plus twenty.
To sneeze before six for everybody,
A ticket is compulsory.
If one sneezes without ticket
Black and blue they beat,
Shaking the snuff the constable bully
By section one plus twenty.
Four rupees he charges
When one's tooth loses,
Moustache if we grow
Desire a hundred anna for each fellow.
Pricking the back , neck downward bending
One plus twenty times he keeps on saluting.
Hither thither , left right
While walking if we sight,
The news goes to the king
And a great many soldiers spring.
Being sweated at noon
Drink water one plus twenty rice-spoon.
The people who write poem,
Cage life is to be spent by them,
With many tunes near the ear coming,
Hundred odissis read out the table of multiplying,
Before him keeping the account book of grocery
They force him to calculate pages of one plus twenty.
If someone snores while sleeping
Suddenly there at noon or the night during
In no time they rub on head after going
Cow-dung with wood-apple's gum mixing,
One plus twenty circles forces him moving
One plus twenty hours keeps him hanging.

**-Surya Kanta Pal, 1st Year, CSE**



**-Anirudha Saha,1st Year, CSE**

# NEED

Something is missing from life;
Neither do I  get happy,
Nor do I enjoy.

Something is missing from life;
That I don't seem to find.

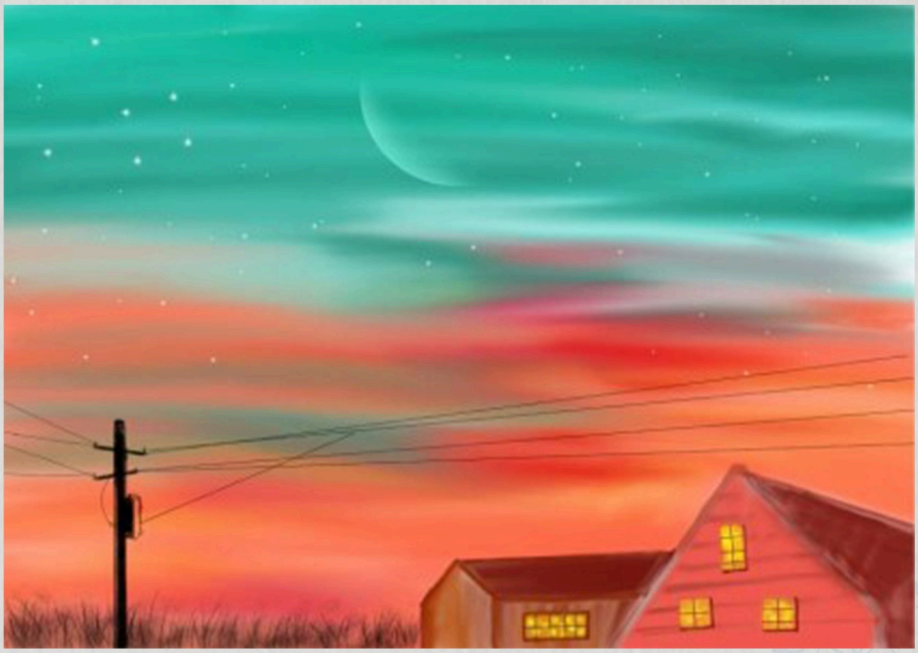
Something very simple.
Is it love?
Or is it the idea of being loved?

Something I need in life.

Maybe just a shoulder to cry;
To let all the pain flow by.

Something inside me is feeling empty,
That I can't seem to find.

**-Tousif Azam, 1st Year, CSE**



**-Tousif Azam, 1st Year, CSE**

# আলোর অপেক্ষায়

সমাজের প্রতি কোনায় আজ
অবক্ষয়ের ছায়া নেমেছে-
মানবতা মূল্য হারিয়েছে;
সত্য তার সৌন্দর্য হারিয়েছে।
আর মানুষ!
হন্যে হয়ে খুঁজে চলেছে তারই প্রতিচ্ছবি।

দোষ তো মনে হয় আমার-
বাস্তবতা যেখানে এক সমুদ্র আতরকেও হার মানায়
সেখানে আলোকবিহীন চোখে আমি
রাতের আঁধারেও সূর্য দেখি।
অলিখিত পাতায়
স্বপ্নগুলোর ব্যাকরণ খুঁজি।

মাঝে মাঝে ভাবি, এ আমি কেমন আমি-
সত্যি বলতে ভয় কি?
পুবগগনে আলো ফোটার অপেক্ষায়-
দুর্ভাগা দেশের হতভাগ্য জনগণের ভবিতব্য যেখানে
আকাশের দিকে তাকিয়ে থাকা,
আমার পরিচয় হোক-আমি প্রতিবাদ।

-Abdul Halim Molla, 1st Year, CSE



-Samiksha Bajoria, 1st Year, CSE



-Arpan Biswas, 1st Year, CSE

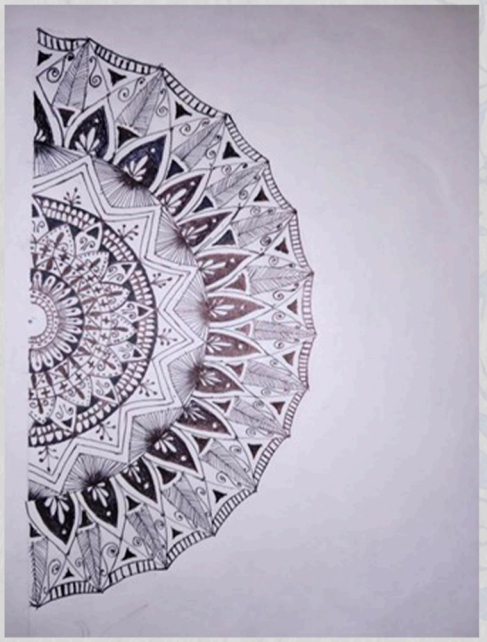
# বাকা একটি নদী

ছোট বেলার ছড়ায় রবি ঠাকুরকে মনে করি যদি ,
এঁকে বেঁকে চলা আমি সেই ছোট নদী।
প্রাণবহুল নদী আমি  বর্ধমান শহরের বুকে আঁকা,
বাস্তুতন্ত্র অক্ষুন্ন রাখা , তোমাদের  বাঁকা।
কত ছোট শিশু  আমার পাশে করেছে খেলা ,
কতজনই তো একা বসে এখানে কাটিয়েছে বেলা ।
ছিল এখানে কিন্তু মাছেদের আসা যাওয়া ,
কত গরম এ আমি দিয়েছি শীতল হাওয়া ।

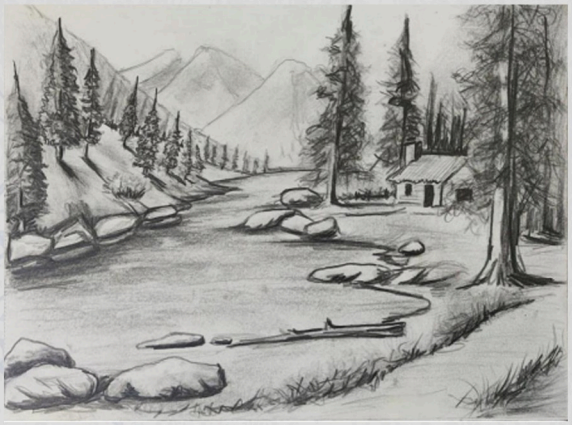
তবে মানুষ এখন যেন আমাকে  চেনে না প্রায় ,
মৃতপ্রায় হয়ে এখন তো আমি ব্রিজ এর তলায় ।
নোংরা আবর্জনা তে সকলে ভরিয়েছে আমায়,
ওরা বলে আমি নাকি বিলুপ্ত প্রায় ।

এবছর ও নদী দিবসে আমাকে কোরোনা কোণ ঠাসা,
ঠিক বাঁচাবে তোমরা আমায়,  এটাই আমার আশা।

-Upasana Saha, 3rd Year, CSE



-Dipanwita Mandal,1st Year, CSE



-SK MD Sakir Hossain, 1st Year, CSE



-Chayan Samanta, 1st Year, CSE

उसके बिना दिल का क्या हाल है उसको बनाऊँ कैसे
उसके लिए इस दिल में कितना प्यार है उसको दिखाऊ कैसे
तो मेरी भावनाओं का मेरा मजाक समझती है
अरे मोहब्बत तो बहुत है उससे पर जताऊँ कैसे??

-Akash Tanti, 1st Year, CSE



-Anwesha Tudu, 1st Year, CSE



-Navneet Kumar Singh,1st year, CSE

किया कया जाए में विषय महत्वपूर्ण हैं,
कार्य हुआ नहीं अभी पूर्ण है।
इस नए विचार एक न तन्कि दिन्न है,
क्योंकि पड़ाव थोडा कठिन है।

मन सिर्फ अब विचारों में बीन है,
पता नहीं कैसा होगा आगामी थे दिन है
कुछ जगह विचार स्पष्ट है
परंतु कुछ स्वंय में परत है,
क्योंकि पड़ाव थोड़ा कठिन है।

किसी किसकी सुनू कुछ कहा न जाए
कारू श्री कृष्ण सारथी सन जाय
जो मेरे लिए उचित वह मार्ग दिख ला जाध
क्योंकि पड़ाव थोड़ा कविन है।

-Akash Tanti, 1st Year, CSE

टकराऊँ मैं जिन्दगी के सफर में उसके साथ,
और मेरी उससे बात हो जाए।
मालूम न हो उसे रास्ता मंजिल तक का,
इस बहाने उससे दो-चार मुलाकात हो जाए ।
मुलाकातों में बाते इतनी हो कि
बात करते-करते शाम से रात हो जाए।
बिजली की कड़क से वो लिपटे मुझसे आकर,
और काश की उसी समय बरसात हो जाए।
वफा करने से दोनों चुके न कभी
और दोनों के उम्र भर के साथ देने वाले
पूराने खयालात हो जाए।

मान जाए घर वाले हमारे इस रिश्ते को,
और उनके साथ मेरे फेरे सात हो जाए।
कसमें खाए दोनों ताउम्र साथ देने का,
इस कदर वो मेरी पूरी कायनात हो जाय।
अगर इतना आसान हो चाहने वालों का सफर
तो फिर इश्क के शहर में क्या बात हो जाए।

-Akash Tanti, 1st Year, CSE



-Nandini Bhagat, 1st Year, CSE

# বীরপুত্র বীরাঙ্গনার

রাস্তা দিয়ে ফিরছিলাম আবৃত্তির ক্লাস থেকে ফিরে
সামনে ফিফথ্ ইয়ার
আবৃত্তির প্রতি মন নেই আর
শুধুই ভাবছি সেই বৃদ্ধের কথা,
তখনই শুনতে পেলাম বৃদ্ধগাঁথা
উনি বলছেন, "বীরপুত্র বীরাঙ্গনার
বীরাঙ্গনার বীরপুত্র"।
আমার মায়ের কথাটা শুনে কেমন লাগল জানি না
তবে আমার ভালো লাগল কারণ-
আমিও তো এই বিশ্বভাণ্ডার মানি না।
আমারও যে প্রকৃতি চেনা বারণ।

বলছি এবার গোড়া থেকে
সেই ঘটনায় মনটা রেখে
রাস্তা দিয়ে যাচ্ছি মায়ের সঙ্গে
সেই বৃদ্ধের চিৎকার শুনে
স্বমনে আবেগের বীজ বুনে
জানতে চাইছি কারণ রণরঙ্গের।

যত আলোচনা শুনলাম
তার মাধ্যমে জানলাম
ছোট্টো সংসারে পর হয়েছেন বাবা।
ছেলে বীরত্ব গাঁথতে
প্রস্তুত বাবাকে মারতে'
মা ফেলছেন ছেলের সঙ্গে থাবা।

"এই জন্যই মানুষ করলাম
এই জন্যই বড়ো করলাম
এই জন্যই জীবন দিলাম
এই জন্যই অন্ন দিলাম
আমি ধন্য
আজ আমি ধন্য
আত্মদানের প্রতিদান
এইভাবেই পেলাম
ছেলের প্রতি জীবনদানে
মর্যাদা খুঁইয়ে দিলাম
আর কী চাই!
এই সংসারে শেষ হয়েছে মোর ঠাঁই"।
রাস্তা দিয়ে লোক যাচ্ছে
সেদিকে হুঁশ নেই
বাবাকে মারতে মারতে
ছেলে হাঁপিয়েছে যেই

আমার চোখ তখন
বৃদ্ধর অশ্রুতে
আর কিস্ময় মোর ভ্রূতে,
এও কি সম্ভব?
ভারত নাকি এগিয়েছে?
ছেলে নিজের হাত বাড়িয়েছে
বাবার প্রতি।
ছেলে সরকারি চাকুরে সম্প্রতি।
উচ্চ শিক্ষিত
অহিংসায় দীক্ষিত

বাবার দেওয়া শিক্ষা
ছেলের কাছে ভিক্ষা
২০১১-এর আদমশুমারিতে ভারতসংখ্যা কত?
১২১ কোটি না?
আজ এই পর্যন্তই
লজ্জায় গল্পটা আমি আর বলব না।
ভারতের জনসংখ্যা ক্রমেই বাড়ছে
এই বিষয়ে সন্দেহ নেই
কিন্তু আমার প্রশ্ন আছে
জানতে চাইছি পাঠক সমাজের কাছে
বলতে পারো
এ ভারতে কতজনের মনুষ্যত্ব আছে?

-Tiyasha Shil, 1st Year, CSE

# শরৎ বন্দনা

হিমের হাওয়া দিচ্ছে দোলা,
দেখবো সবে খুশির খেলা
শরৎ ঋতু তাই দিল ডাক,
দূর্গা মায়ের আবির্ভাব।
শারদা সায়ের অসীম শক্তি।
সর্ব লোকে করে ভক্তি।
একাগ্র চিত্তে করিলে বন্দনা,
ঘুচিবে দুঃখ করিবে চেতনা ॥

-Snaha Sarkar, 3rd Year, CSE



-Soujanya Mallick, 1st Year, CSE

# বৈশাখ

ষান বেড়েছে মাঠ বাড়েনি
মাঠের হওয়ায় আগুন
পলাশ শিমুল শুকিয়ে গেলো
ধরার বুকে ফাল্গুন!

বৃষ্টি এখন পড়ে নাকো
পড়ে হাতের বোমা
ইস্তাহারে মুখ ঢেকেছে
রঙিন ফুলের জামা।

চাকরিগুলো গেছে উড়ে
কালবৈশাখী ঝড়ে
বছর বছর বৈশাখে তাই
গরম হাওয়া বাড়ে।

রবি ঠাকুর, ঠাকুর ওগো
আসবে তুমি কবে
ভানুসিংহেও পদাবলী
হৃদয় জুড়ে হবে।

কিচিরমিচির শুনবো আমি
শুনবো বোলান গান
ঈদের চাঁদে উঠুক জ্বলে
হাজার কোটি প্রণাম।

-Sovan Mondal, 1st Year, CSE



-MaryadaTudu, 2nd Year, CSE

# more Paintings & Photographs



-Dipanjana Karmakar, 3rd year, CSE



-Anirudha Saha,1st year, CSE




-Nandini Bhagat, 1st year, CSE



-Anirudha Saha, 1st year, CSE



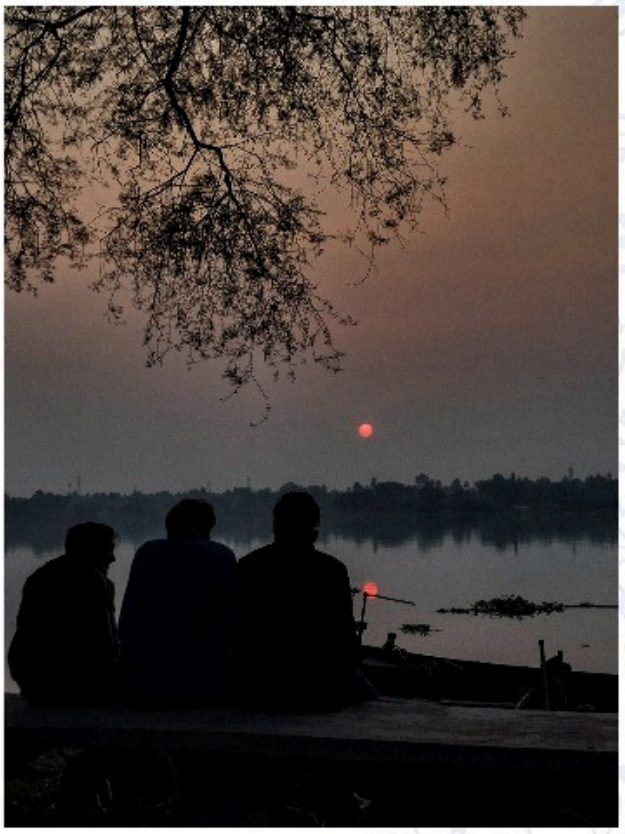
-MaryadaTudu, 2nd year, CSE



-Syamantak Pyne, 3rd Year, CSE



-Syamantak Pyne, 3rd Year, CSE



-Abhradeep Patra, 2nd Year, CSE



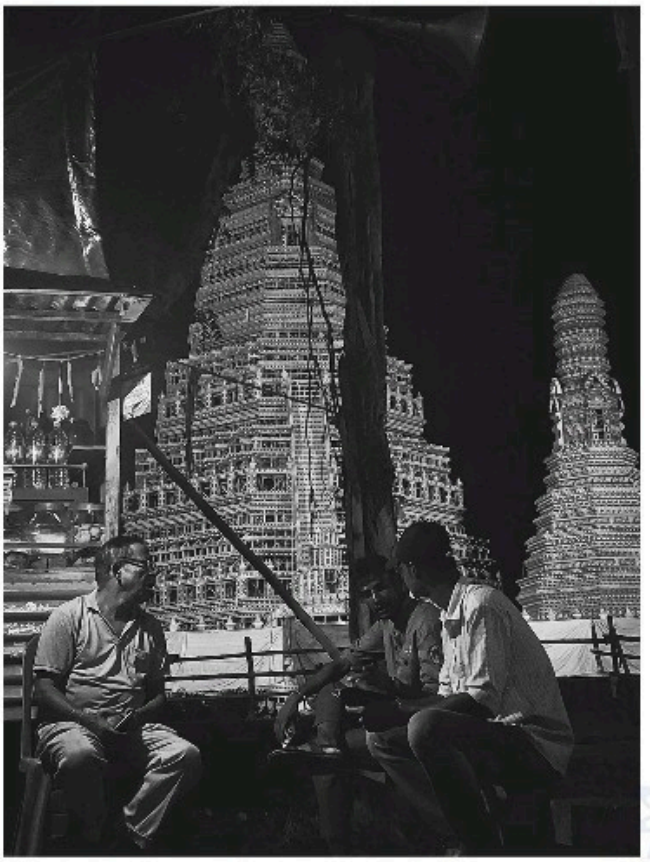
-Sayandeep Saha, 1st Year, CSE



-Syamantak Pyne,3rd year, CSE



-Debayan Bhattacharya, 2nd Year, CSE



-Abhradeep Patra, 2nd Year, CSE