



**NEW HORIZON**  
**COLLEGE OF ENGINEERING**

**DEPARTMENT OF APPLIED**

**SCIENCES**

**COLUMBUS**

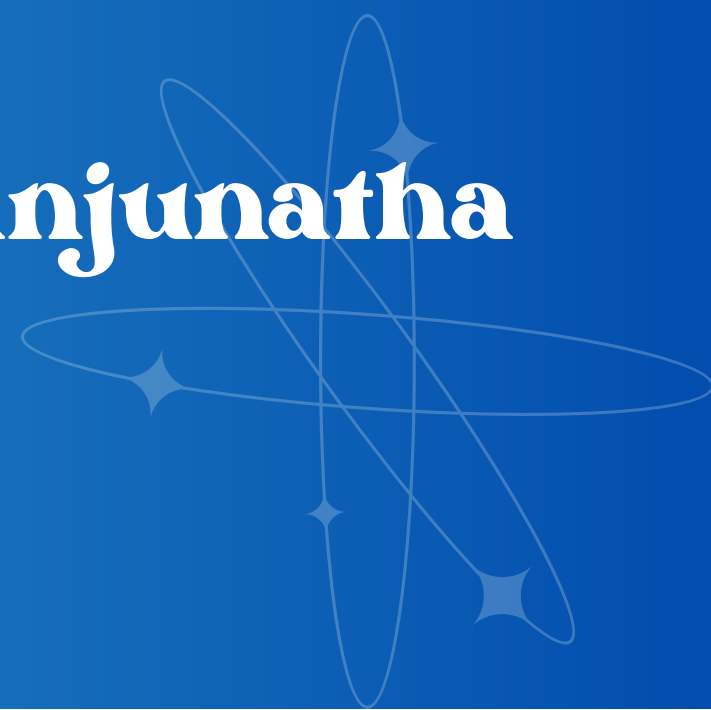
**SEGMENT 6**

# PRINCIPAL'S MESSAGE



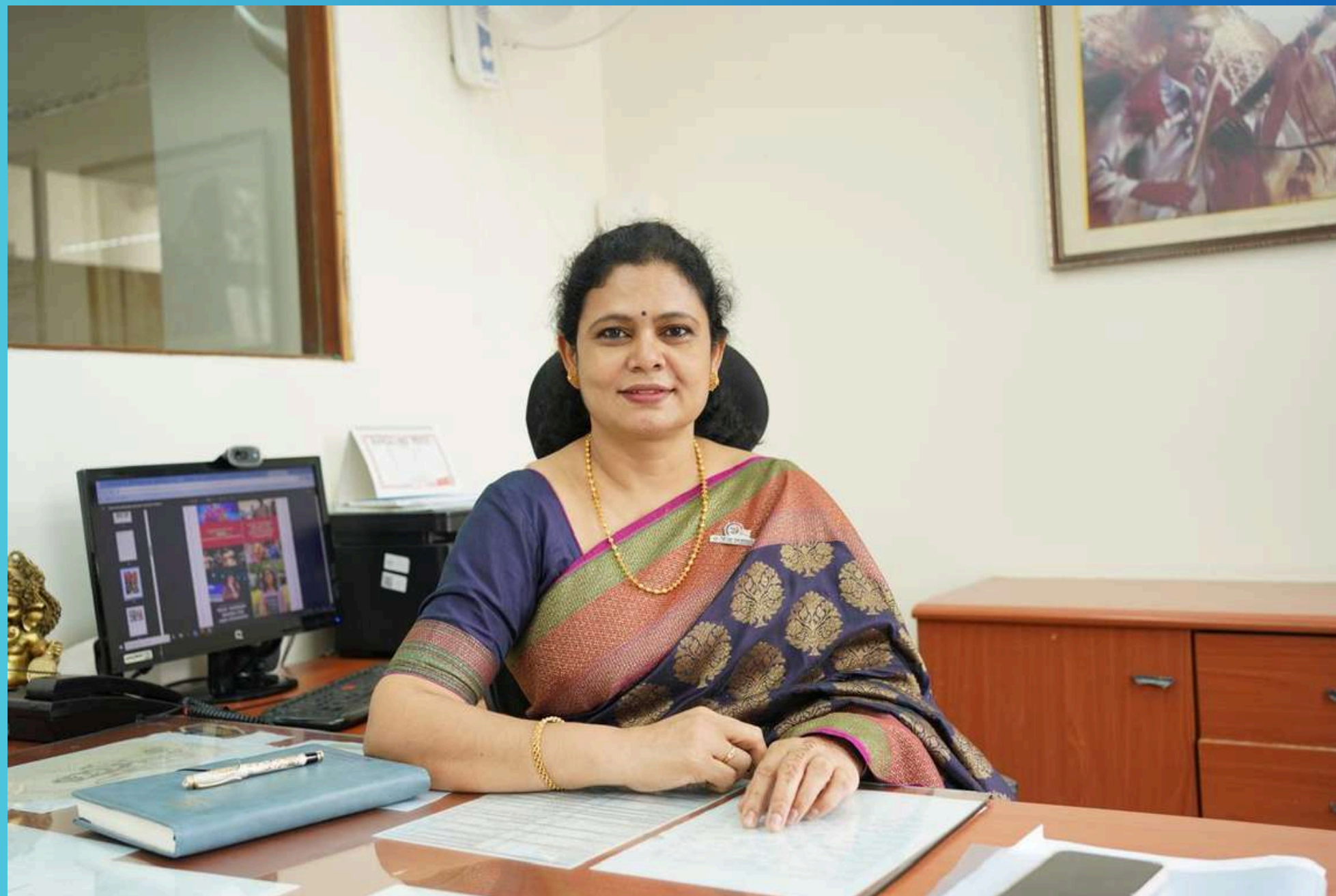
**It gives me great pleasure to give my best wishes to the editorial committee of the Department of Applied Sciences, New Horizon College of Engineering. The students and faculty of the department are always enthusiastic learners and great thinkers embarking and enriching their know knowledge to grow as our future entrepreneurs and be our future pillars of strength. I congratulate all the achievers, contributors and students for bringing out such a captivating newsletter. May this newsletter instill the best in you.**

**Regards , Dr. Manjunatha**



# LETTER FROM HOD

**DR. ANUSUYA DEVI V.S PROF. & HOD –  
APPLIED SCIENCES**



**I am delighted to share our collective achievements in this newsletter, highlighting the remarkable efforts of both our students and teachers.**

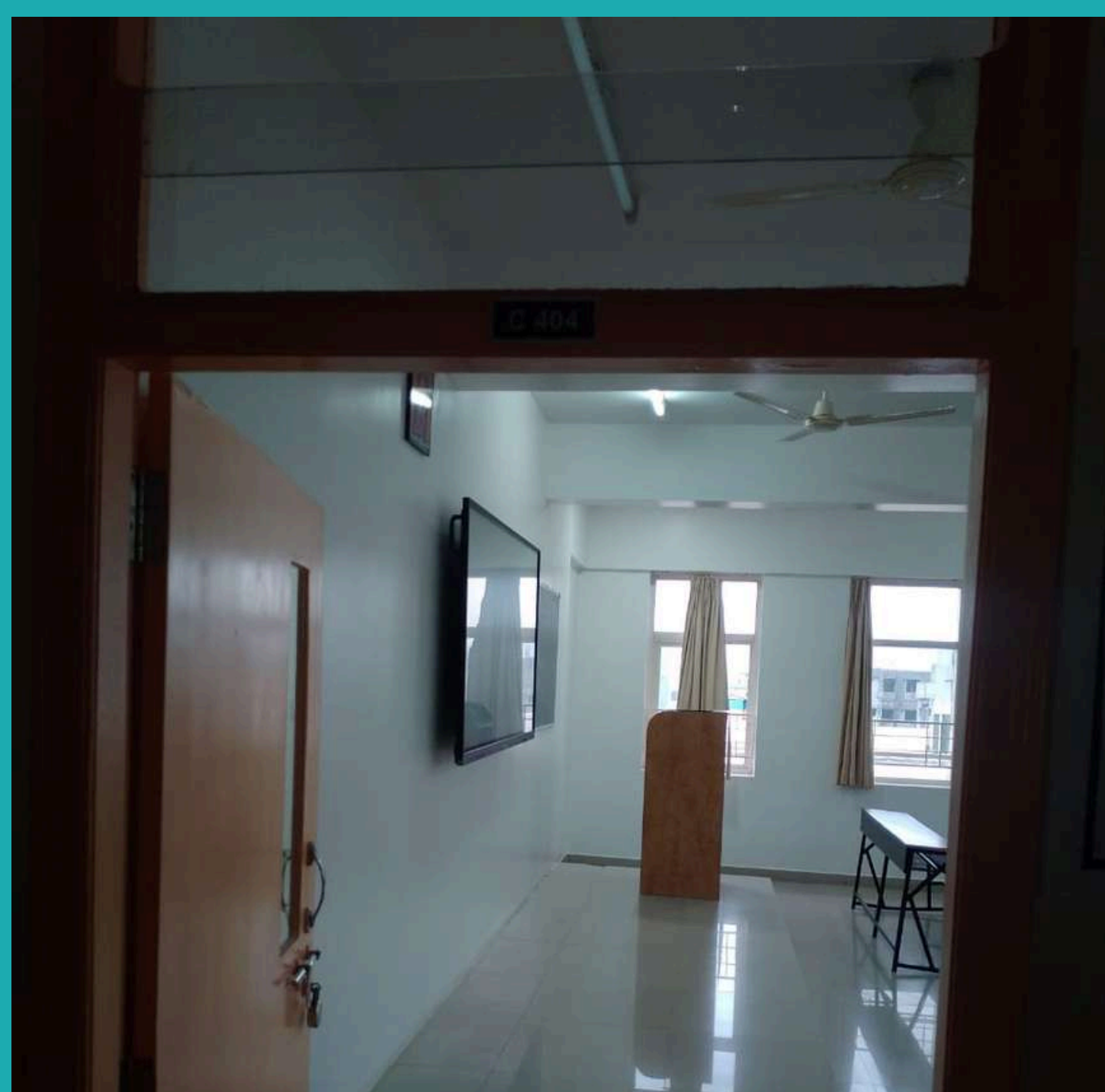
**DR. ANUSUYA DEVI V.S PROF. & HOD - APPLIED SCIENCES To our dedicated faculty members, Your commitment to excellence in teaching and research has been the cornerstone of our success. Your passion for chemistry and tireless efforts to inspire and guide our students do not go unnoticed. Thank you for your invaluable contributions to our department. To our outstanding students, Your achievements this year have been truly impressive. Your curiosity, hard work, and commitment to academic excellence have set a standard for others to follow. We are proud of your accomplishments and look forward to witnessing your continued success in the future. As we celebrate these achievements, let us also acknowledge the collaborative spirit that defines our department. Together, we create an environment where excellence thrives. Thank you all for your dedication and contributions.**

# ABOUT THE DEPARTMENT

Department of Applied Sciences was started in the year 2001. As a fundamental department, supporting all branches in 1st year of engineering, laying emphasis on basics of Sciences and Engineering along with Humanities.

**Numerous research publications in leading National and International Journals have been produced to the credit of department. The department has well-equipped laboratories for Engineering Physics, Basic Electrical Engineering, Engineering Chemistry and Languages. Labs of Mechanical Engineering and Computer Science Engineering aid in developing and nurturing the students in the 1st year. The Department stands tall in developing scientific temperament among the budding engineers along with required elements of Humanities**

**Furthermore, it deals with applications of Basic Sciences in engineering discipline covering all the major domains of technology. Applied Sciences Department has many dedicated Professors, Associate Professors and Assistant Professors, who are actively involved in research activities. Their experiential insights of research are also reflected in classroom teaching.**



# APPLIED SCIENCE

## DEPARTMENTS MOTTO



### VISION

To build strong and sustainable platform for churning out quality students bearing appreciable conceptual knowledge and engineering mindsets to their respective branch department(s).

### MISSION

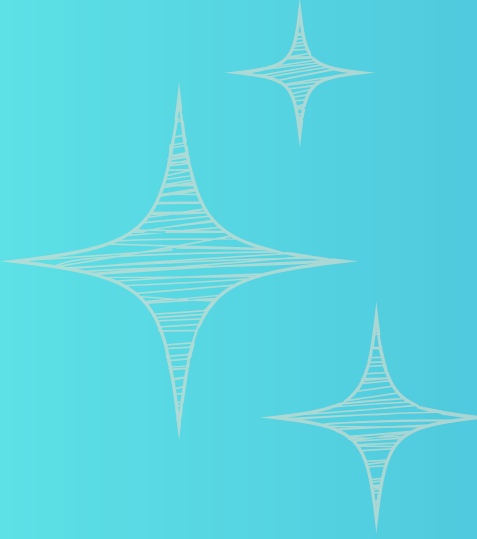
→ To develop and nurture dedicated teaching-learning team equipped with strong personality traits towards application driven approach, encompassing all stakeholders.

### QUALITY POLICY

To provide education services of the highest quality both curricular and co-curricular so that our students can integrate skills and serve industry and society equally well at the Global level.

### GOAL

To set academic and allied environments amongst First year BE students for channeling their personalities towards their parent branches.



# DEPARTMENT ACHIVEMENTS

Dr. Rashi Kubnani is an accomplished academician with over 17 years of teaching experience. She has made significant contributions to her field through publications in reputed journals and remains dedicated to fostering academic excellence and research-oriented learning among students.





## Recognition of Dr. M S Raghu in World's Top 2% Scientists

We are pleased to  
announce that Dr. M  
S Raghu, Associate  
Professor in  
Chemistry

Department has been  
recognized among the  
world's top 2%  
scientists for two  
consecutive years  
2023 and 2024 by  
Stanford University  
published by Elsevier.

This prestigious recognition highlights his sustained research excellence, high citation impact, and significant contributions to global scientific knowledge. This honor underscores not only Raghu's individual achievements but also the institution's commitment to fostering high-quality research, innovation, and academic leadership. It positions him among the leading scientists globally, enhancing the institution's reputation and inspiring the next generation of researchers.



## Recognition of Dr. Ramchandra Nayak in World's Top 2% Scientists

We are pleased to announce that Dr. Ramchandra Nayak, Associate Professor in Chemistry Department has been recognized among the world's top 2% scientists for two consecutive years 2023 and 2024 by Stanford University published by Elsevier.



This prestigious recognition highlights his sustained research excellence, high citation impact, and significant contributions to global scientific knowledge. This honor underscores not only Raghu's individual achievements but also the institution's commitment to fostering high-quality research, innovation, and academic leadership. It positions him among the leading scientists globally, enhancing the institution's reputation and inspiring the next generation of researchers.





# THE STEM CLUB

## **vision**

To cultivate a dynamic space for aspiring engineers and scientists to innovate, collaborate, and be creative.

## **objective**

Skill development – To promote the development of soft skills like teamwork, problem-solving, and critical thinking alongside technical skills.

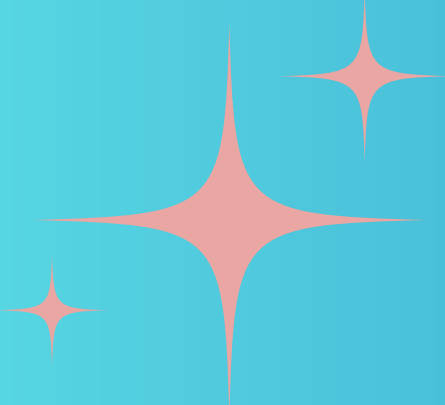
- Hosting innovative challenges – encouraging students to develop solutions to real-world problems and showcase their skills.
- To be a Launchpad for students – propelling students into the endless field of STEM.

## **functions**

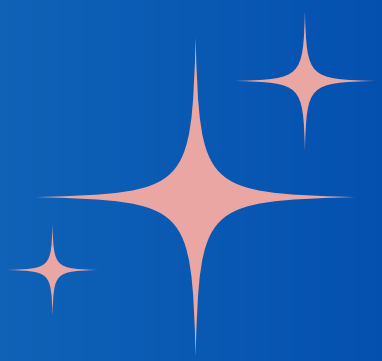
- Creating an interactive and inclusive platform that allows students to showcase their technical skills, creativity, and entrepreneurial mindset.
- Organizing interactive lectures, seminars, and panel discussions with the faculty of NHCE and guests.
- Organizing exhibitions, workshops, and talent hunts allowing students to discover and explore their skills.
- Commemorating and celebrating days that are of high importance in the field of STEM

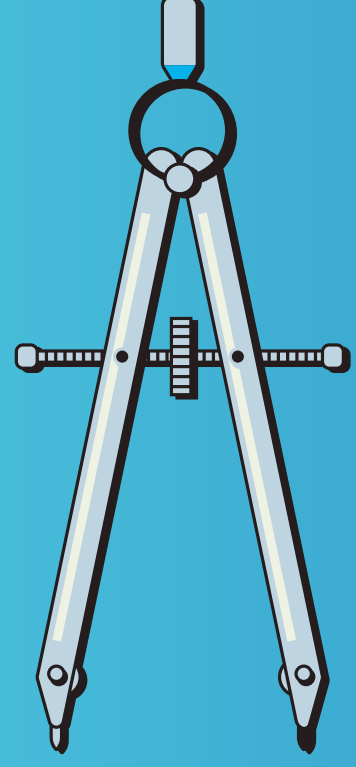
## **outcomes**

- Increased interest in STEM - Encouraging members to develop a greater interest in STEM and fostering a passion for scientific inquiry.
- To promote collaboration – Fostering collaboration and teamwork among students allowing them to exchange their knowledge and ideas.

A faint, light blue atomic symbol graphic consisting of three overlapping elliptical orbits and three dark blue spheres representing electrons, centered in the background.

# STEM CLUB EVENTS





## **Builder's Asylum**

Builders' Asylum was an exciting two-round architectural challenge that pushed participants to combine creativity with practical problem-solving.


In the first round, Crisis on the Rocks, teams tackled an unexpected architectural dilemma, presenting innovative solutions that were judged on creativity, logic, and clarity.



The finalists then moved on to Takashi's Structure, a hands-on round where they constructed models using provided materials. These models were tested for wind and earthquake resistance, along with their aesthetic appeal and presentation. The event offered a dynamic platform for participants to showcase their architectural aptitude, blending critical thinking with real-world application.

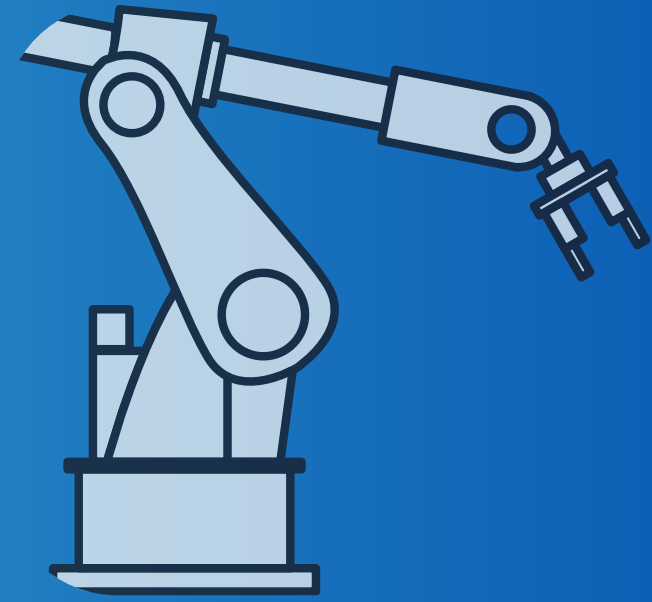


# MEGA EVENTS



## Mega Event - Synapse '25 |

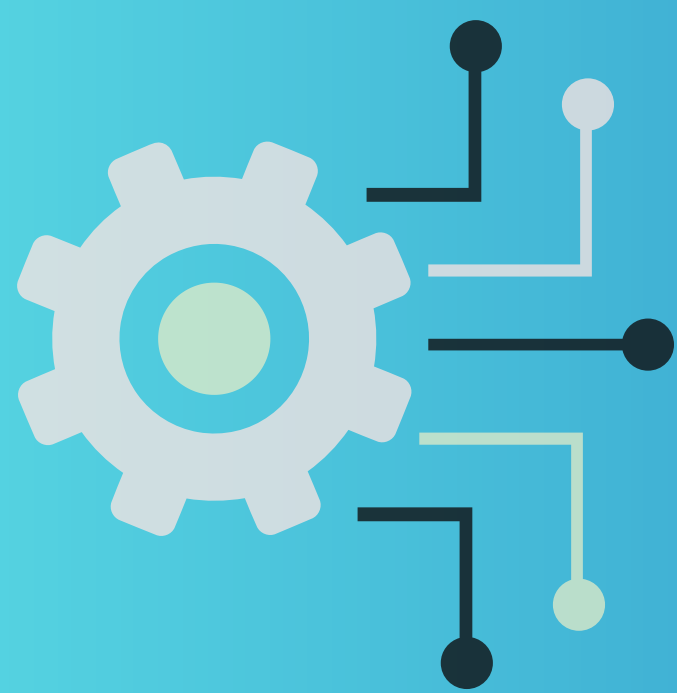
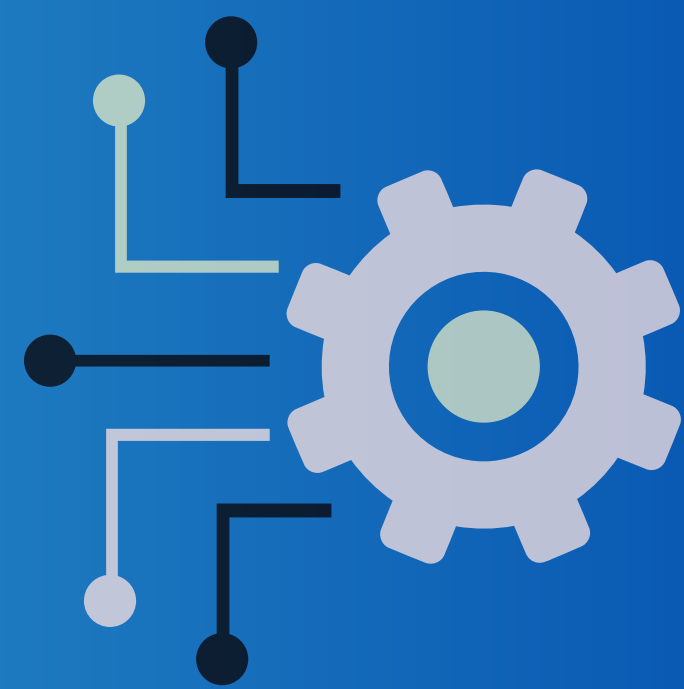
### Event 1: Decode the Signal



Exploring Mega Event – Synapse '25 | Event 1: Decode the Signal

Decode the Signal was a thrilling team-based challenge that placed 54 participants in a simulated space crisis, where they acted as mission control to recover the malfunctioning VAYU-1 satellite. The event unfolded through multiple technical tasks—decoding a Caesar cipher to locate the satellite, interpreting orbital data to trace its path, and analyzing Morse code and visual signals to detect a subsystem power failure. In the final stage, teams presented a recovery report with solutions and preventive measures, showcasing their technical acumen and problem-solving skills. Blending space science, encryption, signal processing, and teamwork, the event offered participants a truly immersive experience that highlighted the challenges of real-world satellite operations.







**Mega Event - Synapse 25'** |  
**Event 2: Cosmic  
Conspiracies**

Cosmic Conspiracies was a fast-paced debate that plunged participants into the world of space mysteries and speculation. From moon landing hoaxes to alien visitations and Martian colonies, teams argued both for and against cosmic theories—regardless of personal beliefs.

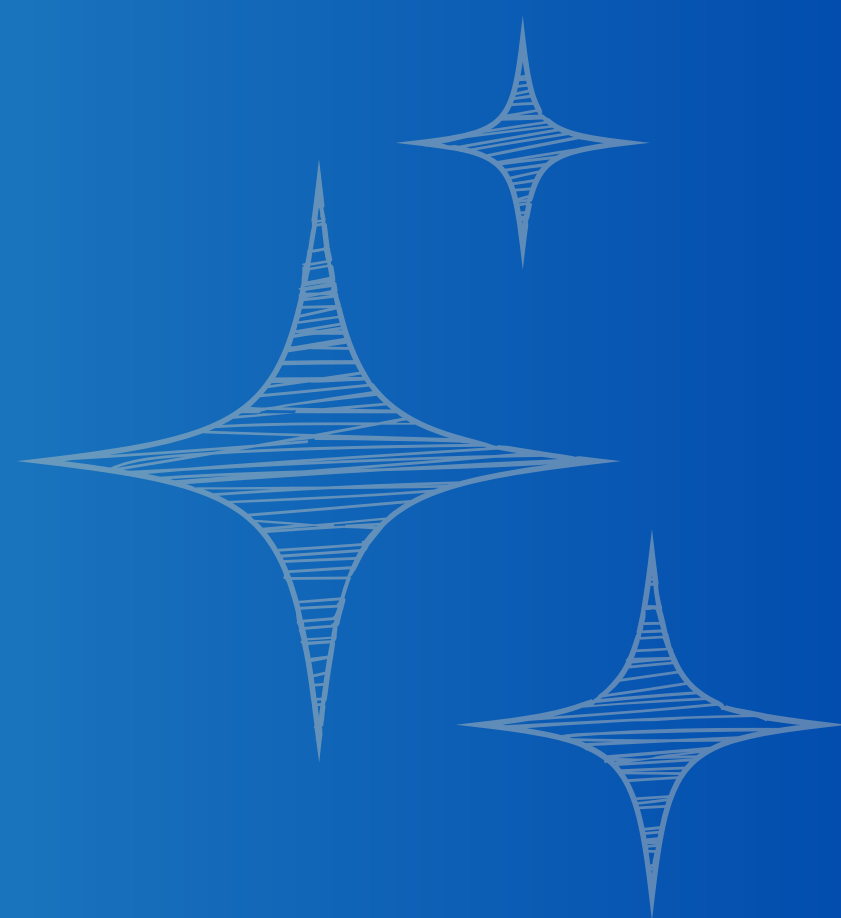


- The structured format tested logic, creativity, and quick thinking, while diverse speaking styles—humor, data-driven reasoning, and sharp rebuttals—kept the energy high. Audience voting added an interactive twist, making the event both entertaining and intellectually stimulating
- The event not only sparked curiosity about the unknown but also honed participants' debating and public speaking skills, leaving everyone with a blend of wonder and critical thinking.





# **WORKSHOPS AND SEMINARS**



# **NANO CRYSTALLINE NICKEL ALLOYS AND COMPOSITE COATINGS**

Department of Applied Sciences had organized a guest lecture on 14/06/2024. Resource person for the day was Dr. J N Balaraju, Chief Scientist & Deputy Head, National Aerospace Laboratories, Bangalore. Dr .Balaraj has vast research experience in the field of surface coatings, eco-friendly coatings and alloys for aerospace engineering. He has published more than 70 papers in journals of international repute. Around 200 students along with the faculty members have attended the talk. Dr.Balaraj explained about the importance of alloys, composites in the field of electroplating and eletroless plating.

# RENEWABLE ENERGY



The Department of Applied Sciences successfully conducted a guest talk on 12th May 2025, featuring Dr. S. T. Aruna, a renowned expert in surface engineering from CSIR–NAL, Bengaluru. The session focused on the critical role of renewable energy in driving sustainable development and addressing global environmental challenges. Dr. Aruna provided an in-depth overview of renewable energy sources such as solar, wind, hydro, tidal, and geothermal energy. She emphasized their significance in reducing greenhouse gas emissions and mitigating climate change. The talk also explored the technological advancements and policy frameworks supporting the transition to clean energy. The session highlighted India's remarkable achievements in the renewable energy sector. As of October 2024, 46.3% of the country's installed energy capacity was derived from renewable sources. Dr. Aruna also discussed India's ambitious goal of reaching 500 GW of renewable energy capacity by 2030, positioning the nation as a global leader in clean energy initiatives.

The talk was highly informative and inspired students and faculty alike to engage more deeply with sustainable technologies and research.

# QUANTUM COMPUTATION

The Department of Applied Sciences hosted a guest talk on “Quantum Computation” for second-semester students on April 16, 2025, conducted in offline mode by Dr. Tribikam Gupta, Professor and Coordinator for COE on Quantum Computation, Department of Physics, RVCE Bengaluru. Quantum computing is gaining momentum, evident in the rise of promising startups, yet keeping up with key technical advancements remains challenging. While progress in quantum computing and related technologies has been remarkable, achieving a general-purpose quantum computer capable of handling large-scale tasks, like prime number factorization, still faces significant hurdles.





Quantum computing is advancing toward practical applications and continues to uncover new physics discoveries. Dr. Gupta emphasized technological advancements, self-reliance in the quantum domain, the National Quantum Mission, quantum startups, innovation hubs, and commercial applications. He discussed the technical details of quantum complexity and highlighted the groundbreaking steps in building super-fast quantum computers. These advancements could potentially transform daily life in this century as profoundly as classical computers did in the last.

# INDIAN KNOWLEDGE SYSTEM



The Department of Applied Sciences had organized a talk on Indian Knowledge System by Dr. Priyameet Kaur Keer, Associate Professor – Department of Management Studies, NHCE, Bangalore, on April 4, 2024, at Falconry Seminar Hall for first year BE students of Chemistry cycle. In her talk, she explained about the ancient Indian sciences and arts, how to preserve Indian heritage, how to apply ancient knowledge to modern problems such as climate change, and also how to help and lead a healthy, sustainable, holistic quality of life. She emphasized on the IKS being an invaluable source of inspiration and wisdom for people around the world.



# QUANTUM COMPUTING

Department of Applied Sciences had organized a Guest Lecture on “Quantum Computing” on 06th May 2024. The speaker was Dr. Jayakumar Vaithiyashankar, IBM Quantum Educator, IBM Certified Associate Developer – Quantum Computation using Qiskit, Assistant Professor, Presidency University, Bangalore.



Quantum computing is a rapidly advancing field that explores the use of quantum mechanics to perform computation. Quantum computing harnesses the principles of quantum mechanics to process information in ways that traditional computers can't. The speaker outlined the underlying principles of Quantum physics and demonstrated the simulation of Quantum gates using IBM Qiskit tool.

The various quantum gates were discussed in the perspective of Quantum circuits. He also emphasized on the power of Quantum computing to revolutionize various industries, including cryptography, optimization, drug discovery, and artificial intelligence..



# **HOW TO WIN PRODUCT OF THE GAME**

Department of Applied Sciences-  
Mathematics had organized a guest talk  
by Mr. Bhaskar Pai, Founder and CEO-  
Fun2do SSP on 23rd May 2024 at  
Falconry Seminar Hall, NHCE. Students  
of second semester BE attended the  
lecture. Mr. Bhaskar Pai addressed the  
students about Innovations and  
Startups using the basic knowledge of  
Mathematics. Around 160 students  
along with the faculty members have  
attended the talk.



# THE JOURNEY FROM ZERO TO ONE : TURNING YOUR IDEA INTO REALITY

Department of Applied Sciences in collaboration with Alumni Association had organized an insightful Alumni Talk titled “The Journey from Zero to One: Turning Your Idea into Reality.” on 08/05/24. The distinguished speaker for the event was Mr. Vaibhav Sharma, an accomplished alumnus who is the Founder of Cope Studio and Dehidden. Mr. Vaibhav Sharma delivered an inspiring and informative talk. His insights resonated deeply with the audience, motivating them to pursue their entrepreneurial aspirations with passion, persistence, and purpose. Students engaged with Mr. Vaibhav in a meaningful way and demonstrated interest in learning about start-ups.

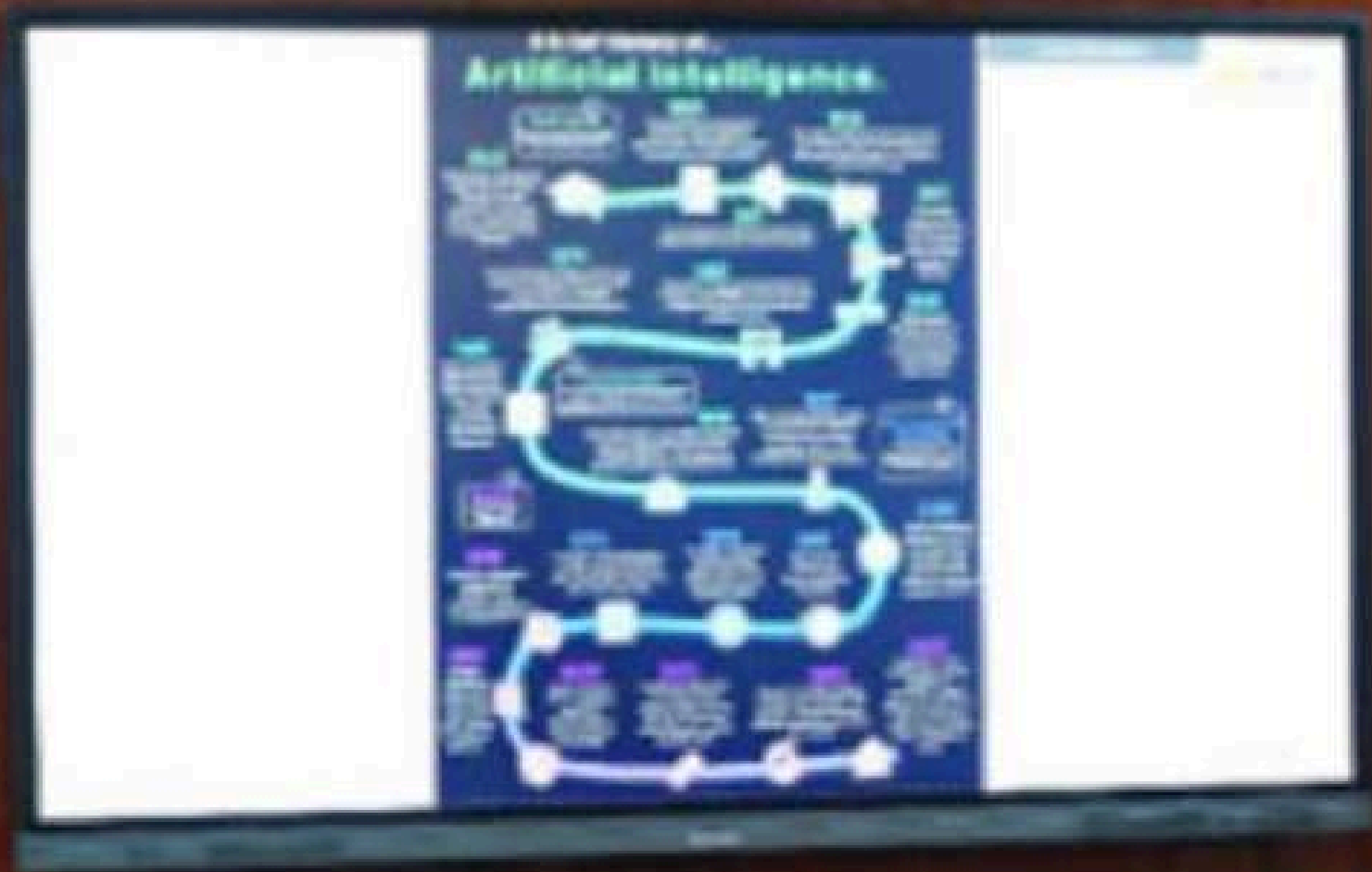


# ARTIFICIAL INTELLIGENCE FOR ENGINEERS

On May 19<sup>th</sup>, 2025, the Department of Applied Sciences-Mathematics hosted an enlightening guest talk by the distinguished Mr. Sudarsan Naganathan, Head of Research and Development, Managing Director, and Vice-President of the Center of IPInfusion India, Bengaluru Branch. His discourse, titled “Artificial Intelligence for Engineers,” captivated the audience with its depth and insight.



The event explored the profound impact of Artificial Intelligence (AI) and its applications of Mathematics in solving real-world challenges. Mr. Naganathan delved into the evolution of AI, highlighting its advantages and transformative potential in various sectors. His engaging discussion shed light on how well-established Mathematical concepts can be harnessed to develop AI-driven solutions for practical problems.



Students were inspired by the talk, gaining a deeper appreciation for the interplay between AI and Mathematics. The session ignited curiosity and encouraged young minds to explore innovative approaches where AI can be leveraged to enhance efficiency, and problem-solving in Engineering and beyond.





# HORIZONITE'S HIVE



## *I am enough*

As children, we wished to grow up fast  
To leave behind the fading past  
But now we long for days before  
When life was less but felt more;  
We run, we chase, we race the clock  
Counting every moments we never stop  
Always moving never still  
Dreaming big but lost in will  
Teenage years-a reckless flight  
A search for love and a war to fight  
Lost in mirrors, chasing trends  
Forgetting time, outgrowing friends;  
Adulthood knocks we play out part  
Bills to pay and broken hearts  
The weight of dreams, the fear of fall  
The silent scream -"Am I enough at all?";  
Then one day, we pause, we see,  
Life was never meant to be  
A checklist, race, or perfect climb,  
But moments lived outside of time.  
So laugh too loud, love too deep,  
Cry, then dance, lose, then keep.  
For every soul, at every stage,  
Life's a story—not a cage.

- Soumya Singh

**Soumya Singh**

**CS DS P Section**



**K R Sree Lalitha**

**ECE Q Section**



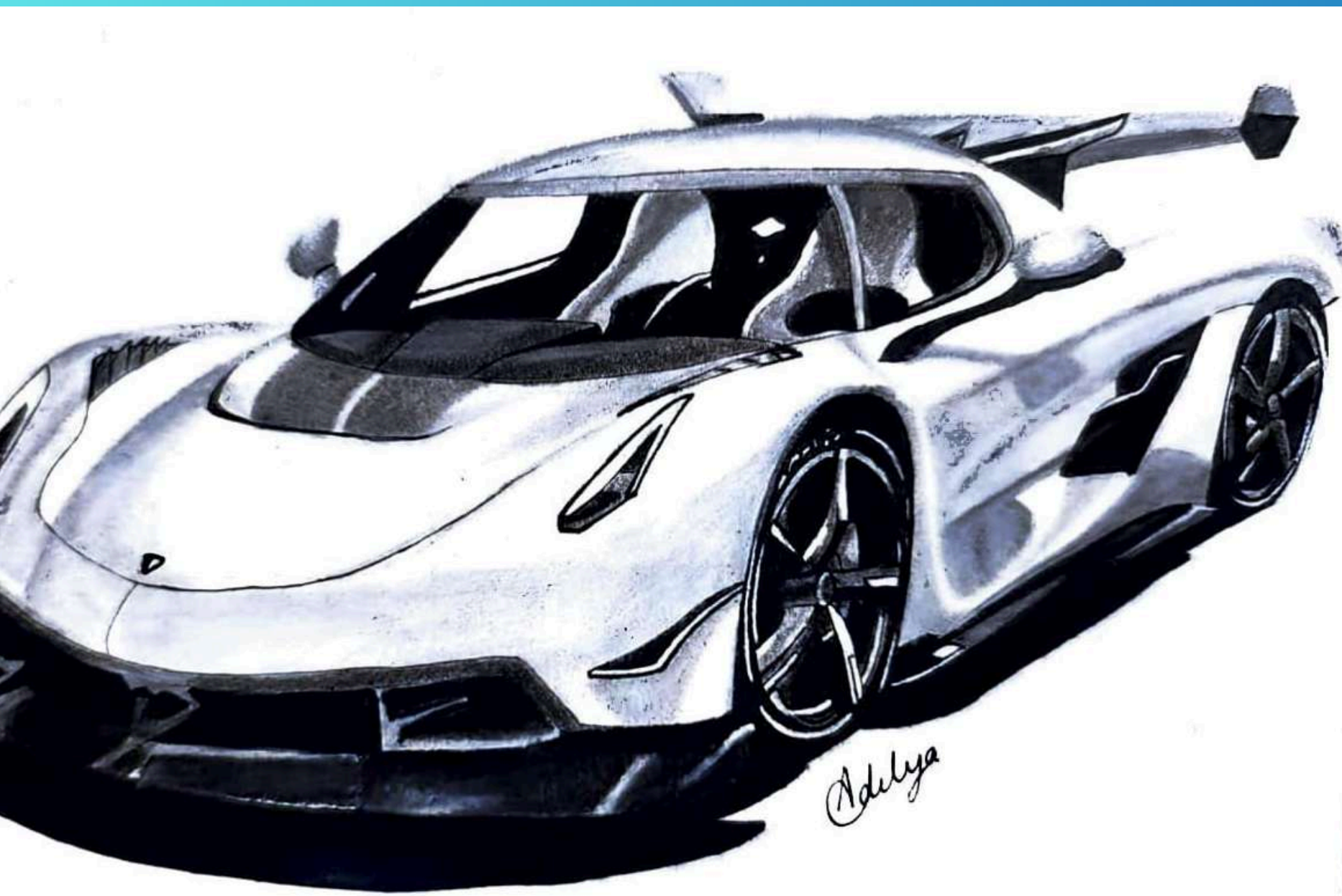
**K R Sree Lalitha**

**ECE Q Section**





**Aditya Anil**  
**ECE Q Section**



# STUDENTS ACHIEVEMENTS



Srimathi P

CSE G Section



Guneesh Kohli

CSE C Section





مدرستنا الثانوية الانجليزية - الشارقة، البنين  
OUR OWN ENGLISH HIGH SCHOOL, SHARJAH - BOYS EDUCATION

**GEMS**  
EDUCATION

## Certificate of Achievement

Awarded to Mihir

of Grade 12 Section A for securing First Place

for spark-x 2023 (The Nexus)

in the Academic Year 2023-2024

23-09-2023

Date



Principal & CEO

**Mihir**

**CSE D Section**

# THE EDITORIAL TEAM

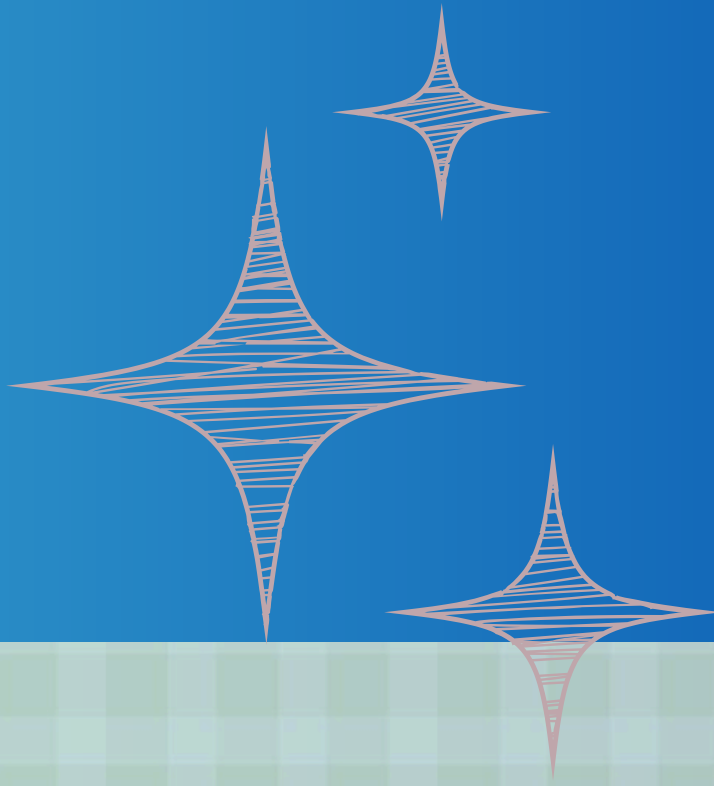
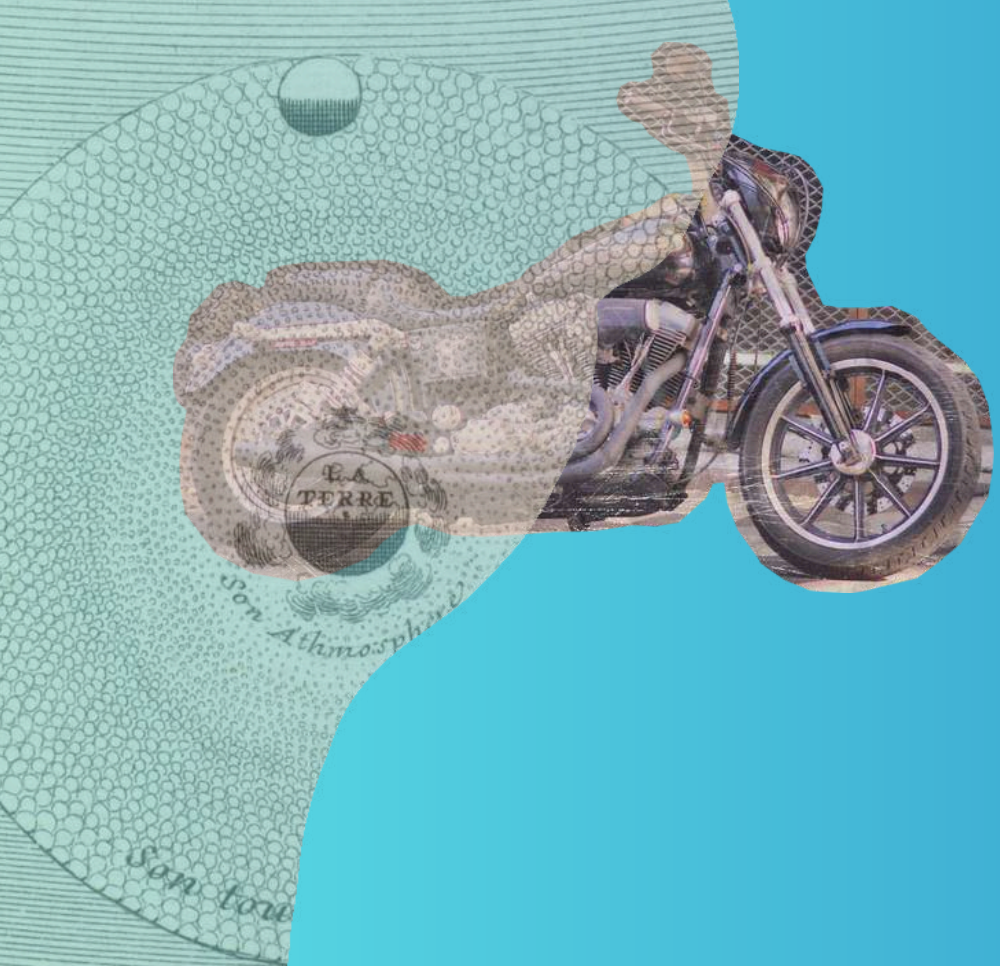
**K R SREE LALITHA**

**DRISHYA DECHAKKA**

**SNIGDHA YADAV**

**SOUMYA SINGH**





# THANK YOU

