

JULY

2024

TECHPULSE



DEPARTMENT OF ELECTRONICS AND
COMMUNICATION ENGINEERING

TECHPULSE

Electronics Department Association

St. Thomas College of Engineering and Technology, Kannur

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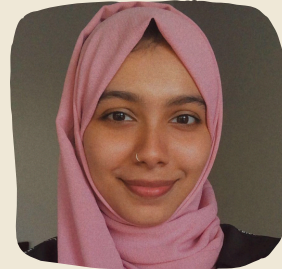
Behind the magazine



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CEO's Message



The release of the 2023-24 edition of "TechPulse" marks another significant milestone for the Department of Electronics and Communication Engineering. As we navigate an era of unprecedented technological shifts, this publication stands as a vibrant record of our collective achievements, research breakthroughs, and institutional growth over the past year.

Within these pages lies a tapestry of original ideas and collaborative success stories that exemplify our commitment to excellence. I am deeply grateful to the visionary faculty and the creative editorial board who have meticulously curated this showcase of talent. It is my hope that "TechPulse" acts as a springboard for future discovery, motivating our young engineers to lead with empathy and precision as they architect the smart, connected infrastructure of tomorrow.

Er. Rijo Thomas Jose
CEO, STM

From The Principal's Desk



I am delighted to present the 2023-2024 edition of Tech Pulse. This academic year has been a period of significant growth, marked by our department's commitment to staying ahead of the "Industry 4.0" curve.

The articles and projects highlighted in this issue reflect a deep engagement with cutting-edge trends such as 5G integration and sustainable electronic design. It is heartening to see our students not just as consumers of technology, but as creators who are mindful of the ethical and environmental impacts of their work. To the faculty and students of the ECE department: your pursuit of excellence continues to elevate the prestige of our institution. May this publication inspire you to keep pushing the boundaries of what is possible in the digital realm.

Dr. Shinu Mathew John

Principal, STM

HOD's Message



Welcome to the 2023-24 edition of TechPulse. This academic year has been a transformative period, defined by our relentless pursuit of technical excellence through hands-on learning and active industry synergy. We believe that true engineering competence is forged when classroom concepts are applied to real-world challenges, and this year's activities have truly mirrored that philosophy.

The department successfully organized a series of specialized workshops focusing on simulation tools, hardware automation, and embedded systems development, providing our students with the practical skills required to design the technology of tomorrow. Furthermore, our frequent expert talks covering wireless networks, mobile communication, and VLSI design allowed students to engage directly with professionals and stay ahead of global industry requirements. These interactions are vital in shaping the 'industry-ready' engineers we strive to produce.

I am particularly impressed by the caliber of the articles featured in this edition. I would like to express my sincere appreciation to the staff and students who took the time to contribute their thoughts, technical findings, and creative perspectives. It is through these articles that we see the true depth of talent within our ECE family. I also congratulate the editorial team for their exceptional effort in bringing this magazine to life. Your commitment to keeping your fingers on the 'pulse' of technology is what makes our department a center for excellence.

Mr. Nithin C

HOD, Department of ECE, STM

Editor's Note



The Department of Electronics and Communication Engineering at ST THOMAS COLLEGE OF ENGINEERING AND TECHNOLOGY proudly presents the annual magazine for the academic year 2023-2024. This publication serves as a comprehensive record of the department's academic progress, technical engagements, and co-curricular achievements over the past year.

Throughout the academic year, the department has consistently fostered an environment of learning, innovation, and professional development. A wide range of activities, including workshops, industrial visits, and technical events, were organized to enhance students' practical knowledge and industry exposure.

Our students have demonstrated remarkable enthusiasm and dedication by actively participating in various competitions, project developments, and collaborative initiatives. The faculty members have also contributed significantly through academic guidance, research activities, and continuous support.

This magazine stands as a testament to the collective efforts of the department in striving for excellence in both academic and technical domains. We hope it reflects the spirit, commitment, and growth of our ECE community at ST THOMAS COLLEGE OF ENGINEERING AND TECHNOLOGY.

Mr. Manu Thomas

Assistant Professor,
Department of ECE, STM

Vision of Department

To produce professionally competent, ethically sound and socially responsible Electronics and Communication Engineers.

Mission of Department

M1: Provide excellent infrastructure and lab facilities for quality education.

M2: Promote industry-academic interactions to keep up with technological advancements.

M3: Develop interpersonal skills and social responsibility among students through project-based and team-based learning.

Program Educational Objectives (PEOs)

Graduates of B. Tech ECE program after graduation will:

PEO1: Exemplify technical competence in designing, analyzing, testing and fabricating electronic circuits.

PEO2: Acquire leadership qualities, rapport, communication skills in the organization and adapt to changing professional and societal needs.

PEO3: Work effectively as individuals and as team members in multidisciplinary projects

Program Specific Outcomes (PSOs)

PSO1: Define, design, implement, model, and test electronic circuits and systems that perform signal processing functions.

PSO2: Segregate and select appropriate technologies for implementation of a modern communication system.

ESSAYS



ELECTRONICS IN INDUSTRY

K GAUTHAM KRISHNA

S4 ECE

In today's rapidly advancing world, electronics has become the silent force driving industrial growth and innovation. From automated production lines to intelligent monitoring systems, electronics play a crucial role in transforming traditional industries into efficient, precise, and highly productive environments. It is not just a supporting tool anymore—it is the backbone of modern industry.

At the heart of industrial electronics lies automation. Machines equipped with sensors, controllers, and embedded systems can perform complex tasks with remarkable accuracy and speed. Technologies like Programmable Logic Controllers (PLCs) and microcontrollers are widely used to control machinery, reduce human intervention, and ensure consistent quality.

This not only improves productivity but also minimizes errors and operational costs. Industries such as manufacturing, automotive, and packaging heavily rely on these systems to maintain smooth and continuous operations.

Another significant contribution of electronics in industry is in monitoring and control systems. Advanced electronic instruments can measure temperature, pressure, flow, and other critical parameters in real time. This data helps industries maintain safety standards and optimize performance. For instance, in chemical plants and power stations, electronic control systems prevent hazardous situations by detecting abnormalities instantly and triggering corrective actions.

The rise of smart technologies has further enhanced the role of electronics in industry. Concepts like the Internet of Things (IoT) have enabled machines to communicate with each other, creating interconnected systems known as smart factories.

These systems can analyze data, predict maintenance needs, and improve decision-making processes. As a result, industries can reduce downtime, save energy, and increase overall efficiency.

Electronics also plays a key role in robotics and artificial intelligence within industrial settings. Robots powered by electronic systems can perform repetitive and dangerous tasks with precision, ensuring worker safety and higher productivity. In sectors like automobile manufacturing, robotic arms are used for welding, painting, and assembly, showcasing the perfect blend of electronics and engineering.

Moreover, electronics contribute to energy management and sustainability in industries. With the help of advanced electronic devices, industries can monitor energy consumption, reduce wastage, and adopt renewable energy solutions. This not only lowers operational costs but also supports environmental conservation.

However, the increasing dependence on electronics also brings challenges. However, the increasing dependence on electronics also brings challenges. Industries must invest in skilled personnel to manage and maintain complex systems.

Additionally, cybersecurity has become a major concern as interconnected systems are vulnerable to cyber threats. Despite these challenges, the benefits of industrial electronics far outweigh the drawbacks.

In conclusion, electronics has revolutionized the industrial sector by enhancing efficiency, safety, and innovation. As technology continues to evolve, the role of electronics in industry will only grow stronger, paving the way for smarter, more sustainable, and highly advanced industrial systems. It is clear that the future of industry is inseparably linked with the progress of electronics, making it one of the most vital components of modern development.

COMMUNICATION THE PULSE OF MODERN ELECTRONICS

ANUGRAH M
S6 ECE

Imagine a world where devices exist but cannot “talk” to each other—no mobile calls, no internet, no live broadcasts. Such a world would be slow, disconnected, and inefficient. This simple thought highlights how essential communication is in the field of Electronics and Communication Engineering. Communication is not just a function; it is the pulse that keeps modern electronic systems alive and active.

Unlike traditional views of communication as mere information exchange, in electronics it represents a dynamic process where signals are created, transmitted, processed, and understood by machines. Every time a message is sent through a smartphone or data is streamed online, complex electronic communication systems work behind the scenes to ensure speed and accuracy.

Technologies such as Digital Communication have made it possible to send large volumes of data with minimal errors, transforming how information is handled. One of the most fascinating aspects of communication in electronics is its invisibility. Signals travel through air, cables, and even space without being seen, yet they carry voices, images, and data in real time. Systems like Satellite Communication allow global broadcasting and navigation, connecting even the most remote parts of the world. This has made communication a powerful tool for unity and development.

In industries, communication systems act as the nervous system of operations. Machines communicate with each other to coordinate tasks, monitor performance, and maintain efficiency. Without proper communication, even the most advanced machinery would fail to function effectively.

Another important dimension is mobility and real-time decision-making. Consider autonomous vehicles: they rely on sensors to detect obstacles, processors to analyze data, and communication systems to interact with other vehicles or infrastructure. This seamless integration ensures safety and precision. Without fast electronics and reliable communication, such AI systems would fail to operate effectively.

Moreover, the rapid development of communication technologies has expanded the reach of AI.

High-speed networks enable large-scale data transfer, making it possible for AI systems to learn from vast datasets. This has led to advancements in fields like healthcare, agriculture, education, and robotics.

Electronics ensures that these systems are compact and efficient, while communication ensures they remain connected and updated.

However, this growing dependence also introduces challenges. Data security, signal interference, and hardware limitations must be addressed to ensure reliable AI performance. Engineers continuously work to design better electronic components and more secure communication systems to support the evolving needs of AI.

In conclusion, electronics and communication are the unseen forces that power Artificial Intelligence. While AI represents intelligence, electronics provides the body, and communication provides the connection. Together, they create systems that can sense, think, and act. As technology advances, this trio will continue to redefine innovation, shaping a future where intelligent systems are seamlessly integrated into everyday life.

ELECTRONICS IN SPACE

ATHITRA V
ASST .PROF,ECE

THE ROLE OF ELECTRONICS IN SPACE TECHNOLOGY HAS BECOME INCREASINGLY SIGNIFICANT IN RECENT YEARS, FORMING THE FOUNDATION OF ALL MAJOR SPACE MISSIONS. FROM COMMUNICATION AND NAVIGATION TO CONTROL AND DATA PROCESSING, EVERY FUNCTION OF A SPACECRAFT DEPENDS ON WELL-DESIGNED AND RELIABLE ELECTRONIC SYSTEMS. OPERATING IN SPACE, HOWEVER, PRESENTS UNIQUE CHALLENGES SUCH AS EXPOSURE TO RADIATION, EXTREME TEMPERATURE VARIATIONS, AND VACUUM CONDITIONS, WHICH DEMAND SPECIALIZED DESIGN APPROACHES AND ROBUST COMPONENTS.

RECENT ACHIEVEMENTS LIKE CHANDRAYAAN-3 AND ADITYA-L1 HIGHLIGHT THE EFFECTIVENESS OF ADVANCED ELECTRONIC SYSTEMS IN EXECUTING COMPLEX MISSIONS WITH PRECISION. THESE DEVELOPMENTS REFLECT THE PROGRESS MADE IN AREAS SUCH AS SENSING TECHNOLOGIES, COMMUNICATION SYSTEMS, AND ONBOARD CONTROL MECHANISMS.

AT THE SAME TIME, EMERGING TRENDS ARE SHAPING THE FUTURE OF SPACE ELECTRONICS. THE GROWING USE OF SMALL SATELLITES AND CUBESATS HAS MADE SPACE EXPLORATION MORE ACCESSIBLE AND COST-EFFECTIVE. INTEGRATION OF ARTIFICIAL INTELLIGENCE IS ENABLING ONBOARD DATA PROCESSING AND AUTONOMOUS DECISION-MAKING, REDUCING RELIANCE ON GROUND-BASED SYSTEMS. IMPROVEMENTS IN COMMUNICATION TECHNOLOGIES, INCLUDING HIGH-SPEED AND OPTICAL COMMUNICATION, ARE ENHANCING DATA TRANSFER CAPABILITIES, WHILE ADVANCEMENTS IN POWER ELECTRONICS ARE ENSURING EFFICIENT ENERGY MANAGEMENT IN SPACECRAFT.

AS SPACE TECHNOLOGY CONTINUES TO EVOLVE, ELECTRONICS WILL REMAIN AT ITS CORE, DRIVING INNOVATION AND EXPANDING POSSIBILITIES. FOR STUDENTS AND RESEARCHERS IN ELECTRONICS AND COMMUNICATION ENGINEERING, THIS FIELD OFFERS A VALUABLE PLATFORM TO EXPLORE, INNOVATE, AND CONTRIBUTE TO ADVANCEMENTS THAT EXTEND BEYOND OUR PLANET.

THE NOISE WITHIN

ANN MARY GEORGE
ASST .PROF,ECE

THE ELECTRONICS LAB WAS UNUSUALLY QUIET THAT EVENING. ROWS OF INSTRUMENTS RESTED UNDER DIM LIGHTS, BUT ONE SCREEN FLICKERED WITH RESTLESS ENERGY. ANANYA SAT IN FRONT OF THE OSCILLOSCOPE, HER EYES FIXED ON THE UNSTABLE WAVEFORM. IT DANCED ERRATICALLY—DISTORTED, INTERRUPTED, FILLED WITH NOISE. SHE SIGHED. NO MATTER HOW MANY TIMES SHE REDESIGNED THE CIRCUIT, ADJUSTED THE PARAMETERS, OR RECALIBRATED THE SYSTEM, THE NOISE REFUSED TO DISAPPEAR. HER PROJECT WAS TO DESIGN A RELIABLE COMMUNICATION SYSTEM—ONE THAT COULD TRANSMIT A SIGNAL CLEARLY, WITHOUT DISTORTION. BUT REALITY, SHE REALIZED, WAS FAR FROM IDEAL.

"SIR, WHY CAN'T WE EVER GET A PERFECTLY CLEAN SIGNAL?" SHE FINALLY ASKED HER PROFESSOR THE NEXT DAY.

HE LOOKED AT HER FOR A MOMENT AND SMILED GENTLY. "IN THEORY, YOU CAN," HE SAID. "BUT IN REAL LIFE, NOISE IS ALWAYS PRESENT. THE GOAL ISN'T TO ELIMINATE IT COMPLETELY... IT'S TO MANAGE IT".

THAT NIGHT, THOSE WORDS LINGERED IN HER MIND. BUT IT WASN'T JUST THE CIRCUIT THAT FELT NOISY ANYMORE. HER THOUGHTS WERE JUST AS CHAOTIC—FILLED WITH SELF-DOUBT, FEAR OF FAILURE, AND THE PRESSURE TO PROVE HERSELF. WHAT IF I'M NOT GOOD ENOUGH? WHAT IF I FAIL? THE QUESTIONS ECHOED, GROWING LOUDER, LIKE INTERFERENCE IN A WEAK SIGNAL. SHE CLOSED HER NOTEBOOK AND STARED INTO THE SILENCE.

AND THEN, A FAMILIAR CONCEPT SURFACED IN HER THOUGHTS—SIGNAL-TO-NOISE RATIO (SNR). IN COMMUNICATION SYSTEMS, THE CLARITY OF A MESSAGE DEPENDS NOT ON THE ABSENCE OF NOISE, BUT ON THE STRENGTH OF THE SIGNAL COMPARED TO IT. SHE SAT UP. "WHAT IF LIFE WORKS THE SAME WAY?" SHE WONDERED.

THE NEXT DAY, ANANYA RETURNED TO THE LAB—NOT WITH FRUSTRATION, BUT WITH A NEW PERSPECTIVE. INSTEAD OF FIGHTING THE NOISE ENDLESSLY, SHE FOCUSED ON STRENGTHENING THE SIGNAL.

- SHE INTRODUCED FILTERS TO REMOVE UNNECESSARY FREQUENCY COMPONENTS.
- SHE AMPLIFIED THE DESIRED SIGNAL.
- SHE IMPROVED GROUNDING AND MINIMIZED INTERFERENCE.

SLOWLY, THE WAVEFORM BEGAN TO CHANGE. IT WASN'T PERFECT—BUT IT WAS CLEARER, STRONGER, AND MEANINGFUL.

DAYS PASSED, AND SOMETHING ELSE BEGAN TO CHANGE TOO. ANANYA STARTED APPLYING THE SAME PRINCIPLES BEYOND THE LAB. SHE BEGAN TO FILTER OUT NEGATIVITY—UNNECESSARY COMPARISONS, SELF-DOUBT, AND FEAR. SHE FOCUSED ON AMPLIFYING HER STRENGTHS—HER KNOWLEDGE, HER EFFORT, HER PASSION. SHE LEARNED TO STAY GROUNDED, EVEN WHEN EXTERNAL PRESSURES TRIED TO INTERFERE.

THE NOISE DIDN'T VANISH. BUT HER SIGNAL GREW STRONGER. ONE EVENING, AS THE OSCILLOSCOPE DISPLAYED A STABLE WAVEFORM, SHE ALLOWED HERSELF A QUIET SMILE. IT WASN'T NOISE-FREE. BUT IT WAS ENOUGH. ENOUGH TO CARRY THE MESSAGE. ENOUGH TO BE UNDERSTOOD.

HER PROFESSOR WALKED BY AND GLANCED AT THE SCREEN. "LOOKS LIKE YOU'VE FINALLY SOLVED IT," HE SAID.

ANANYA NODDED, HER EYES STILL ON THE WAVEFORM. "YES, SIR," SHE REPLIED SOFTLY. "IN COMMUNICATION SYSTEMS—AND IN LIFE—IT'S NOT ABOUT REMOVING ALL THE NOISE... IT'S ABOUT MAKING SURE YOUR SIGNAL IS STRONG ENOUGH TO RISE ABOVE IT".

STORIES

1. Rise After the Fall

ANASWAR SURENDRAN

S8 ECE





Rohan was an ordinary engineering student carrying an extraordinary weight on his shoulders. While his friends moved smoothly through their semesters, he found himself stuck—struggling to pass exams, drowning in backlogs, and losing confidence bit by bit. Every result day felt like a reminder that he wasn't "good enough," and every failed test pushed him closer to giving up.

There were nights when he stared at his books helplessly, wondering why nothing made sense. Days when he avoided conversations because he didn't want to explain why he had failed again. The pressure from family, the fear of judgment, and the constant comparison with others slowly broke him from within.

But life changes in moments—sometimes all it takes is one. For Rohan, that moment came when he overheard a professor saying, "You're failing not because you're incapable, but because you've forgotten to believe in yourself." Those words struck him like lightning. For the first time in months, he realized that his real battle wasn't with equations or circuits—it was with his own self-doubt.

From the very next day, he began his slow but determined journey upward.

He woke up early, made timetables, asked doubts without hesitation, watched lectures repeatedly, and practiced problems even when his head hurt. He started studying not out of fear, but out of discipline.

The transformation wasn't magical—it was built brick by brick.

One chapter at a time.

One concept at a time.

One mini victory at a time.

When the next exam results came, his hands trembled as he opened the portal. This time, he didn't fail. In fact—he had scored better than he ever had. And that small success gave him strength to push harder.

Semester after semester, Rohan kept climbing. The boy who once feared exams became the student helping others understand tough subjects. The one who almost quit engineering walked across the stage on graduation day with the proudest smile—knowing he had earned every bit of that moment.

Rohan's journey wasn't about becoming the topper.

It was about becoming stronger than his weakest days.

He learned that failure doesn't define you—your rise after the fall does.



2. *The Pawprints She Left Behind*

Meera had always believed that love comes in many forms, but the purest form entered her life on a rainy evening—a tiny golden puppy shivering near her doorstep. The moment she picked her up, the puppy curled into her arms as if she had finally found home. Meera named her Tuffy, and from that day onward, they became inseparable.

Tuffy wasn't just a pet.

She was Meera's shadow, her comfort, her secret-keeper.

Through school pressure, friendships, growing-up troubles—Tuffy was always there, wagging her tail, reminding Meera that she was never alone.

Every morning began with Tuffy's excited jumps.

Every walk felt like an adventure.

Every sad moment ended with Tuffy resting her warm head on Meera's lap, telling her without words, "I'm here."

But life, no matter how beautiful, has chapters we wish we could skip.

One winter evening, Tuffy suddenly fell ill.

Meera rushed her to the vet, trembling, praying, refusing to imagine the worst. For two days, she didn't sleep—her eyes fixed on Tuffy's, whispering, "*You'll be okay... please.*"

But Tuffy's small body couldn't fight anymore.

When the vet gently shook his head, Meera felt the world collapse around her. The silence after Tuffy's last breath was louder than anything she had ever heard. She held her tightly, tears falling on her fur, whispering the words her heart struggled to accept:

"Thank you for loving me... and I'm sorry I couldn't save you."

The days after that were the hardest.

Her room felt empty.

Her mornings had no excitement.

Her heart felt like a wound that refused to close.

Meera cried at night, clutching Tuffy's collar, wishing for just one more moment. But grief slowly taught her something—love doesn't disappear when someone leaves.

It stays, quietly shaping who you become.

So instead of drowning in pain, Meera chose to honour Tuffy's memory. She began volunteering at an animal shelter, helping abandoned dogs find homes. Every time she rescued one, she felt Tuffy's spirit beside her, wagging her tail proudly.

A year later, when she adopted a sick stray puppy, Meera whispered softly,

"Tuffy sent you, didn't she?"

And in that moment, the ache in her chest felt a little lighter.

Meera never forgot Tuffy.

She didn't have to—because some loves leave pawprints not on floors, but on hearts.

**SANA T P
S6 ECE**





3. *Wings Born from Dreams*

In the small town of Rameswaram, a young boy named Avul Pakir Jainulabdeen Abdul Kalam would often sit by the seashore, watching birds glide effortlessly across the sky. Their wings fascinated him. Their freedom inspired him. He didn't know it then, but those simple childhood moments would shape the destiny of a boy who would one day be called India's Missile Man.

Kalam came from a humble family. His father was a boat owner, and his mother cooked meals for people to support the household. They didn't have much money, but what they had in abundance was love, discipline, and values. Kalam learned early that dreams aren't built on wealth—they're built on determination.

School wasn't easy for him in the beginning. He wasn't born a genius; he built himself into one.

He woke up before sunrise to deliver newspapers, studied under dim streetlights, and spent hours reading anything he could find about science and flight. His teachers noticed something unique—not just intelligence, but hunger. A desire to learn, to explore, to rise.

One day, a teacher showed him a diagram of a simple aircraft and said,

“Kalam, if you have the courage to dream, you can build things like this.”

Those words lit a spark inside him—a spark strong enough to push through every struggle ahead.

Years later, after endless studying, rejections, failures, and unwavering resilience, Kalam joined India's space and defence programs.

He worked tirelessly, often sleeping in the laboratory, often failing, but never once losing hope. His rockets exploded. His projects were delayed. But each failure only strengthened his resolve.

When India launched the SLV-3 satellite vehicle, and later developed its most advanced missiles, the world recognized the power of Kalam's perseverance. When he became the 11th President of India, millions saw him as a symbol of simplicity, humility, and limitless inspiration.

But what made Kalam truly extraordinary wasn't his position or achievements—it was his heart.

He believed in the dreams of young people.

He believed that knowledge should be shared, not guarded. And he believed that a child with courage could change the world.

In one of his speeches, he said,

“Dreams are not what you see in sleep. Dreams are those that do not let you sleep.”

Kalam's life wasn't just a journey from a small village to the Rashtrapati Bhavan.

It was a message to every young mind:

No dream is too big, and no background is too small.

He taught us that with hard work, humility, and faith, even the most ordinary person can achieve extraordinary heights.

Just like the birds he admired as a child, APJ Abdul Kalam grew his own wings—

and inspired an entire nation to fly.



FASMIRA ISMAIL
S6 ECE

POEMS

...forgot,
...mind?
...tance be forgot,
...auld lang syne!

Chorus
For auld lang syne, my dear,
For auld lang syne,
We'll tak a cup o' kindness yet,
For auld lang syne.
And surely ye'll be your pint stoup!
And surely I'll be mine!
And we'll take a cup o' kindness yet,
For auld lang syne.

Chorus
We twa hae run about the braes,
And pou'd the gowans fine;
But we've wander'd mony a weary fit,
Sin' auld lang syne.

Chorus
We twa hae paidl'd in the burn,
Frae morning sun till dine;
But seas between us braid hae roar'd
Sin' auld lang syne.

Chorus
And there's a hand, my trusty fiere!
And gie's a hand o thine!
And we'll tak a right gude-willie-waught,
For auld lang syne.





Whispers of a Rainy Day

The sky wakes up in shades of grey,
Clouds gather close as if to say,
“Hold on, world, a change is near—
The rain is coming, soft and clear.”
A cool wind dances through the trees,
Carrying secrets in its breeze;
The leaves begin their gentle sway,
Welcoming the stormy day.
Raindrops fall like silver threads,
Tapping roofs and window sheds;
Each drop a story, pure and small,
Painting patterns as they fall.
The air turns fresh, the Earth feels new,
Fields sparkle with a vibrant hue;
Puddles mirror the cloudy sky,
Where paper boats and dreams float by.
Thunder hums a distant song,
Telling clouds to move along;
Lightning sketches lines of gold—
A daring art the heavens hold.
And as the rain begins to slow,
A quiet calm begins to grow;
The world sighs softly, washed and bright,
Covered in a gentle light.
A rainy day is more than weather—
It’s Earth and sky breathing together;
A whispered promise in every shower,
Of nature’s mood, magic, and power.

**MARJANA T
S4 ECE**



Old Photographs

Old photos hide inside a drawer,
Silent keepers of “before”;
Edges worn and colors fade,
Yet stories linger, gently made.
Memories sealed from years long past,
Frozen moments meant to last;
A laugh, a smile, a stolen glance—
A frame that holds a fleeting chance.
Yet one small look can bring them back,
Like sunlight breaking through the black;
A single glance can fill the eyes,
With joy, with ache, with soft surprise.
They rise like dust in morning light,
Softly swirling, warm and bright;
Echoes of people, places, days,
Whispering through the golden haze.
Old photographs don’t simply stay—
They carry worlds tucked far away;
And when we hold them, heart in hand,
We relive moments once so grand.
For time may move and life may race,
But photographs remain a place—
Where memories breathe, and gently call,
Reminding us we’ve lived it all.

**RISHIKESH N
S4 ECE**



Echoes of Circuits and Signals

In silent wires where currents flow,
A world of logic starts to glow,
Through tiny paths of coded light,
Electronics turns dark into insight.
With resistors, chips, and signals bright,
It builds the bridge from thought to sight,
A language formed in volts and waves,
Where every pulse a purpose saves.
Across the air, unseen yet near,
Messages travel, loud and clear,
Through space and time, they find their way,
Turning night into a connected day.
From whispered bits to data streams,
Communication carries dreams,
Linking hearts and minds afar,
Like constellations joined by a star.
Together they stand, a perfect pair,
One gives form, one sends it through air,
Engineering not just machines, but connection—
A harmony of circuits and human reflection.
So here it lies, this field so true,
Where science meets what we can do,
Electronics builds, communication binds,
Shaping the future of connected minds.

KRISHNENDU S NAIR
S4 ECE

QUOTES

“Knowledge doesn’t make you better than others; it makes you better than who you were yesterday.”



“College teaches lessons no textbook ever could.”

“Every book is a silent conversation between the writer’s soul and the reader’s mind.”

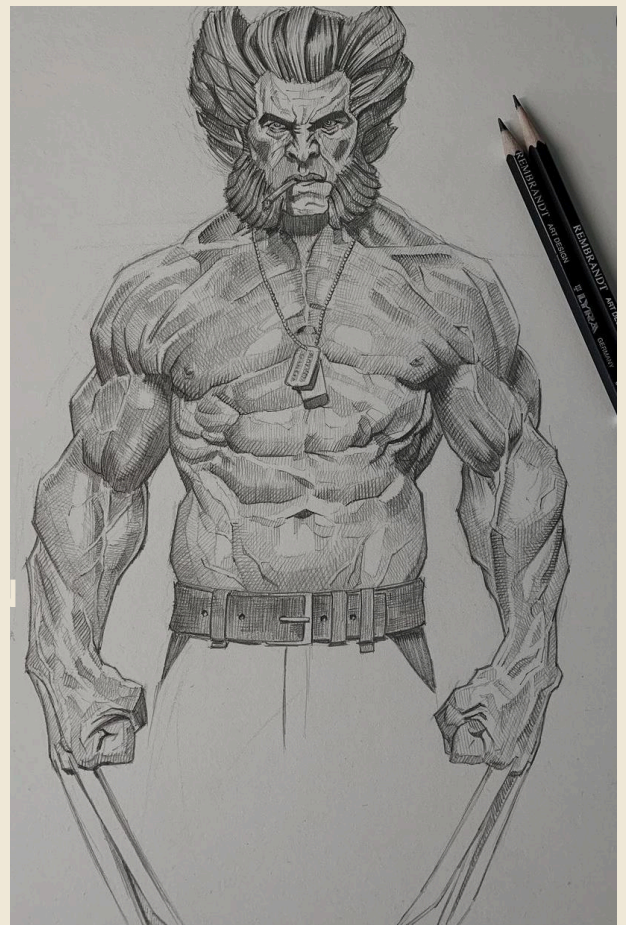
“Innovation distinguishes between a leader and a follower.”

“Assignments today, innovations tomorrow.”

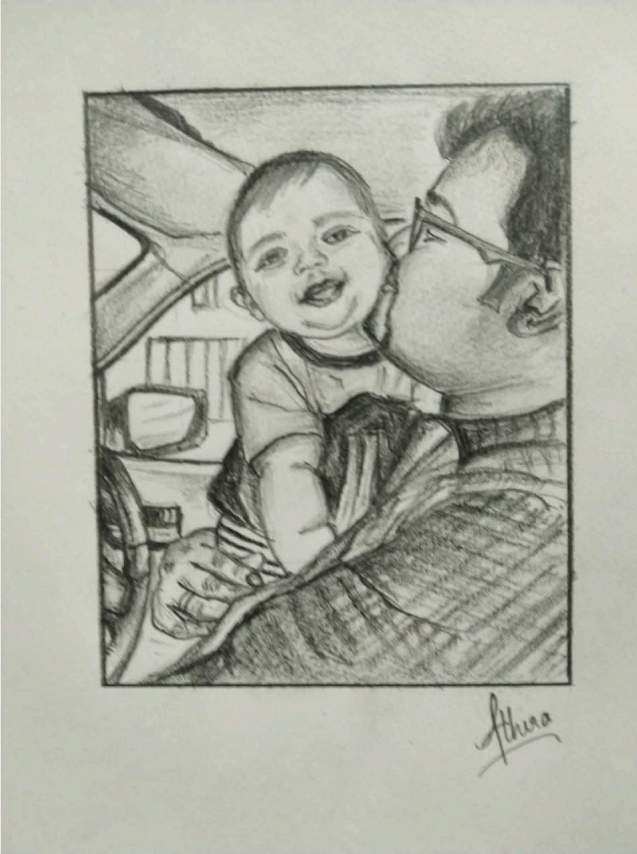
“Behind every smart system is a smarter mind.”

“Build something today that solves tomorrow.”

SKETCHES

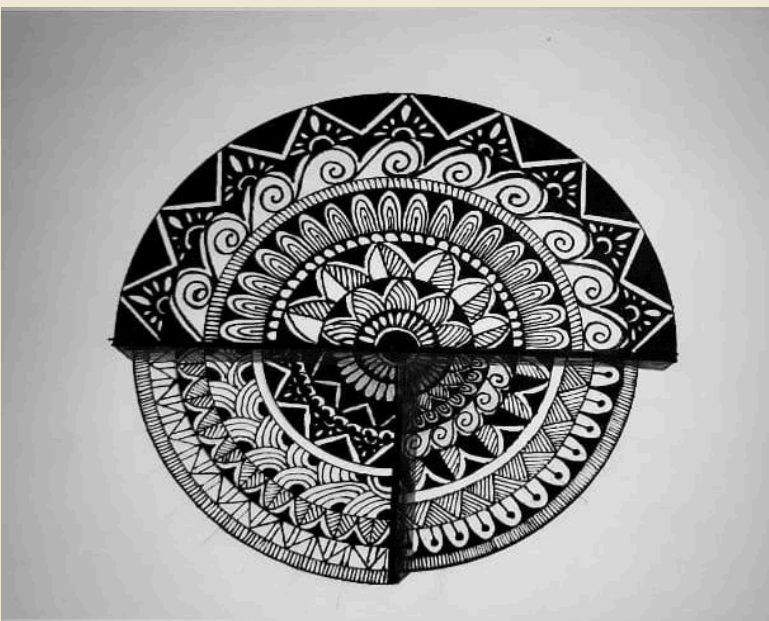


SKETCHES



Ms. ATHIRA V

Assistant Professor,
Department of ECE, STM



SAFNA O V
S4 ECE

ACHIEVEMENTS



MOMENTS OF PRIDE

- In June 2023, Anetha Mary Soman was awarded her PhD degree for her thesis titled "Investigation on Channel Estimation Techniques for Spatial Modulated Systems.
- Dr. Anetha Mary Soman has been selected as an approved research supervisor under KTU & an approved PhD co-supervisor at Manipal Academy of Higher Education.
- Ms. Arsha C Dinesh, Ms. Sreetha Sreedhar K, Mr. Nivin VK&Mr. Manu Thomas attended a 3-Day FDP on Practical Aspects of Communication Engineering with Hands - on, organized by ECE Department, VAST.
- Ms. Arsha C Dinesh &Ms. Athira V attended a 5-Day FDP on Opportunities of Power electronics in Smart grid, renewable energy resources and electric vehicles, organized by EEE Department, SCMS Ernakulum.
- Mr.ManuThomas,Mr.NivinV.K&Ms. Sreetha Sreedhar K attended a 5-Day FDP on VLSI to system design - Silicon to end application approach, organized by AICTE,
- ARM Education and STM microelectronics.
- Dr. Anetha Mary Soman attended a 2-Day Workshop on NBA accreditation, organized by NIT Calicut as part of activities of the Margadarshan Scheme of the AICTE.
- Ms. Sujisha PP & Mr. Rahul VA attended a 5-Day FDP on Innovative Teaching and Learning Pedagogy jointly organized by World Innovators University, Research Foundation of India & RFlcare.

NPTEL ACHIEVEMENTS:

- Dr. Anetha Mary Soman & Mr. Nithin C. have successfully completed the NPTEL course Accreditation and Outcome Based Learning in Elite-Silver category.
- Mr. Manu Thomas has successfully completed the NPTEL course Analog Circuits in Elite-Silver category.
- Ms. Arsha C. Dinesh & Ms. Sreetha Sreedhar K. have successfully completed the NPTEL course NBA Accreditation and Teaching Learning in Engineering (NATE) in Elite category.
- Ms. Sreetha Sreedhar K. has successfully completed the NPTEL course Principles of Communication system-1 in Elite category.
- Ms. Sujisha P.P. has successfully completed the NPTEL course Teaching and Learning in Engineering (TALE) in the Elite category.

MOMENTS OF PRIDE

NPTEL ACHIEVEMENTS:

- Abhay Rithik, Erin Ruksheed, K Sana Fathima and Sheik Muhammed Sahad of 2021-25 batch and Anujith K and K Gautham Krishna of 2022-26 batch has successfully completed various NPTEL courses.

PHOTO GALLERY



