



SETHU INSTITUTE OF TECHNOLOGY

AN AUTONOMOUS INSTITUTION | ACCREDITED WITH 'A' GRADE BY NAAC
Approved by AICTE, New Delhi & Permanently Affiliated to Anna University, Chennai
PULLOOR - 626 115, KARIAPATTI (TK), VIRUDHUNAGAR DISTRICT.

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ADROIT 2K'23



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SETHU INSTITUTE OF TECHNOLOGY

***DEPARTMENT OF ELECTRONICS AND COMMUNICATION
ENGINEERING***

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**YEARLY MAGAZINE
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VISION AND MISSION OF THE INSTITUTE

Institute Vision:

To promote excellence in technical education and scientific research for the benefit of the society.

Institute Mission:

- To provide quality technical education to fulfill the aspiration of the student and to meet the needs of the industry.
- To provide a holistic learning ambience.
- To impart skills leading to employability and entrepreneurship.
- To establish effective linkage with industries.
- To promote Research and Development activities.
- To offer services for the development of society through education and technology.

VISION AND MISSION OF THE DEPARTMENT

Department Vision:

To achieve excellence in education and research in the field of Electronics and Communication Engineering for the development of society.

Department Mission

- ✓ Imparting quality technical education in Electronics and Communication Engineering through contemporary laboratory facilities and accomplished faculty to cater to the needs of the industry.
- ✓ Providing a conducive learning environment through the state-of-the-art infrastructure and innovative teaching learning practices.
- ✓ Infusing the professional skills needed for employability and entrepreneurship.
- ✓ Collaborating with industries for mutual benefit of knowledge transfer.
- ✓ Promoting research in Electronics and Communication Engineering.
- ✓ Providing services to the society through extension activities and technology enabled services.

PROGRAMME EDUCATIONAL OBJECTIVES (PEO's)

- Possess strong technical knowledge in Electronics and Communication Engineering to address the real-world challenges. (Core Competence)
- Demonstrate continual interest in learning new technologies for a successful professional career. (Lifelong Learning)
- Exhibit professional skills and practice ethical principles with social consciousness. (Professionalism)

PROGRAMME OUTCOMES (PO's)

1. Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems. (**Engineering knowledge**)
2. Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences. (**Problem Analysis**)
3. Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety, and cultural, societal, and environmental considerations. (**Design and Development of Solutions**)
4. Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the Information to provide valid conclusions. (**Conduct Investigations of Complex Problems**)

5. Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations. **(Modern Tool Usage)**

6. Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues, and the consequent responsibilities relevant to professional engineering practice. **(The Engineer and Society)**

7. Understand the impact of professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development. **(Environment and Sustainability)**

8. Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice. **(Ethics)**

9. Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings. **(Individual and Teamwork)**

10. Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions. **(Communication)**

11. Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments. **(Project Management and Finance)**

12. Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. **(Life-long learning)**



**FACILITIES WITH
ELECTRONICS AND COMMUNICATION
ENGINEERING**





COMMUNICATION LAB



CENTER FOR ELECTRONIC MATERIAL AND ANTENNA RESEARCH



CENTER OF EXCELLENCE IN SIGNAL AND IMAGE PROCESSING



OPTICAL AND MICROWAVE LAB



VLSI DESIGN LAB



SEMINAR HALL



PROJECT LABORATORY



MICROPROCESSOR AND MICROCONTROLLER
LABORATORY



INDUSTRY SUPPORTED IOT LABORATORY



ELECTRONIC DEVICES LABORATORY



ELECTRONIC CIRCUITS LABORATORY



DEPARTMENT LIBRARY



DIGITAL SIGNAL PROCESSING LABORATORY



DIGITAL ELECTRONICS LABORATORY



**AWARDS
&
ACHEIVEMENTS OF ECE**





Interactions with Ms.Preetha, MD & Partner Nanban ESG Solution, USA



Dr.M.Parisa Beham and Dr.R.Tamilselvi participated in 180th Indian Science Congress, Nagpur

S. No	Name of the Faculty/Student	Mentors	Department	Title of the Project	Amount Received
1.	Mr. S M Seeni Mohamed Aliar Maraikkayar	Dr R Tamilselvi Dr.M.Parisa Beham	ECE	Bionic Arm for Amputees	15 Lakhs
2.	Ms.A. Sabah Afroze	Dr R Tamilselvi Dr.M.Parisa Beham	ECE	Detection of Osteoarthritis in Knees using thermal images	15 Lakhs
3.	Ms.A. Sabah Afroze	Dr R Tamilselvi Dr.M.Parisa Beham	ECE	Odor less Napkin Disposal Machine	15 Lakhs
4.	Ms. Brindha	Dr.M. Sheik Dawood Mrs. Devika	ECE	Biopolymer For Eco friendly Bags	11 lakhs
5.	Mr.M. Venkat	Dr.R.Tamilselvi Mr.Vairamuthu	ECE	Tyre Pressure regulator	15 Lakhs
Total Amount					71 Lakhs

MSME 1.0 Hackathon Ongoing Projects

S. No	Department	Name of the Student/Faculty	Title of the Project	Name of the mentors	Grant (Lakhs)	Duration
1	ECE	Mr. Seeni Mohamed Aliar Maraikkayar S M and Ms. Kasthuri M	Thaisei Care	Dr.M. Parisa Beham and Dr.R. Tamilselvi	15	2023 - 2024
TOTAL					Rs.15 Lakhs	

MSME 2.0 Hackathon Ongoing Projects



Mr. Naveen Raj R & Ms. Poojavarshini R, receiving award at ADC Contest 2023



Ms.Kasthuri M, Ms. Madhumitha J, won in Innovera23' Ideathon Contest 2023



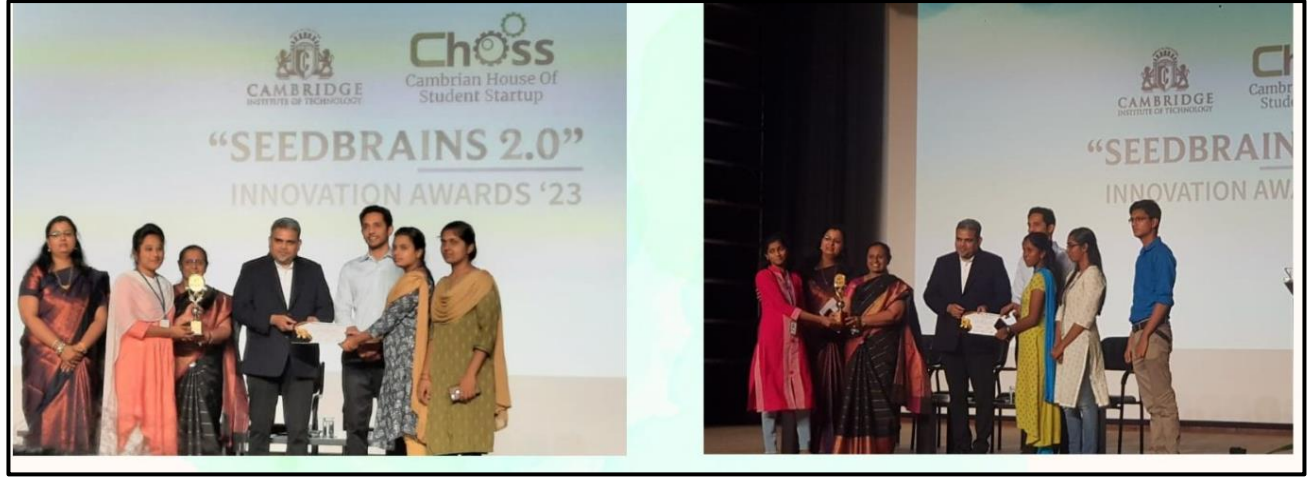
Mr.S.Manobala, receiving H-Social Creator 2021 award and won the student innovation contest TNSI 2021



EDII Innovator Award received by Mrs.T.Ruba



Excellence in Research Award received by Ms.J.Judith, 2023



Ms.Sathiya Pandiya Lakshmi S and Mr. Gurunanthan won award in Seedbrain 2.0, 2022



Signed MoU with Indra Insignia, Chennai.



Signed MoU with TNAU, Coimbatore.



Signed MoU with MultiMedia University (MMU), Malaysia.



ARTICLES



BLUE BRAIN PROJECT

Introduction

Human brain, the most valuable creation of God. The man is called intelligence because of the brain. But we lose the knowledge of the brain when the body is destroyed after the death. But blue brain, the new name of the world's first virtual brain, means a machine that can function as human brain.

Virtual brain

A machine that can function as a brain. This virtual brain recreates the high-speed electrochemical interaction that takes place within the brain. It can take Decision. It can think, it can respond and can keep things in memory. The virtual brain is used to upload the content of the natural brain and keep the intelligence, knowledge, and skills of any person for ever and to remember things without any effort.

Blue Brain

IBM is developing a virtual brain known as blue brain, which becomes the world's first virtual brain known as blue brain, it is expected to scan yourself into a computer within 30 years. Short-term memory, situations such as old person's memory loss and time taken by the older person's memory loss and time taken by old peoples to recognize to a person can be overcome by blue brain. The blue brain power includes the capacity of 100 billion human brains, nerve cells that enable us to adapt to the quick array of stimuli. It used the "Blue gene". The Blue gene is a built using system -on-a-chip technology in which all functions of a node (except for a main memory) are integrated into a single application -specific integrated circuit (ASCI). This ASCI includes 2 power PC440 cores running at 700MHz associated with each core is a 64bit "double ". Floating point unit (PPV) that can operate in single instruction, multiple can operate in single instruction, multiple data (SIMD) mode. It has an operating speed of Peta FLOPS with minimum power consumption. This supercomputer can be used in "co-processor" or "Virtual node "mode. A supercomputer capable of processing 228 TFLOPS. Blue brain aims at building software replica or template which could reveal many existing aspects of brain circuits, memory capacity and how memories are lost. This can also be worked out best way in compensate and repair error circuits. The neurological disease treatment can also be detected by blue brain model.

Advantages of Blue Brain

- Blue Brain act as a supercomputer, the processing speed and memory could make entire human brain stimulated.
- Things could be remembered Without any effect.
- The intelligence of the people after death can also be used under the facility of BlueBrain.
- It can take its own decisions.
- The most important role played to help the physically impaired deaf to hear via direct nerve stimulation.
- Business analysis, attending etc. are very significant functions that an intelligence machine can do consistently.
- It can be used as an interface between human and animal minds. The BBP has animals successful in rats and some other animals which is a sign of success.
- A noval tool for drug discovery for brain disorder
- A foundation for molecular modeling of brain functions.

Disadvantages of Blue Brain

- Humans become more dependent upon the computer and another fear is found with respect to human cloning.
- A very costly procedure of regaining the memory back.
- Technical knowledge as a human cloning against us
- computer virus's unit pose an increasingly circuit threat.

Uploading Human Brain - Nanobots

Uploading is possible using small enough to travel through the circulatory system. Traveling into spine and brain, they will be able to monitor the activity and structure of our CNS. This provides an interface with computers. Which still resides in our biological form. This Nanobots carefully scan our brain and provide a computer readout of the connection and the information entered into computer and continue to function .Thus the complete brain data is uploaded in computer .The blue brain offers a better understanding of human consciousness, which the ability to think for itself when it was first fed. Electrical impulse strange patterns begins to appear with lightning like flashes by cells and scientists recognized from living human and animal processes ."It happened entirely on its own".

Thus, Blue Brain helped the scientist to understand the brain's actual process which arose from a brain concept. Blue Brain operates at inconvenient speeds like computers faster than the human brain. A Human Brain aims to unlock the secrets of the brain by using the brute power of a supercomputer. Flash of activity was started by BlueBrain behavior. On the first day the result happened entirely on its own.

Hardware and software

- A supercomputer, processor memory with a very large storing capacity processor with high processing power.
- A program to convert the brain to input signal, which is received by computer and vice-versa.
- Powerful nanobots act as the interface between the computer and natural brain. The blue brain has 8000 processors.
- Microcircuit-3
- 4,096 quad-core nodes (16.384 cores in total)
- Each core is a Power PC 450,850 MHz
- Total :56 teraflops, 16 terabytes of memory
- 4Rack .one row. Wired as a 16*16*16 3D torus
- 1 PB of disk space, GPFS parallel file system
- Operating system: Linux SuSE 10
- Public front end: bluegene. Epfl.ch and processing log

T.Anish Sulthana
PG Student/COS
Dr.M. Sheik Dawood
Prof./ECE

INSPIRING QUOTES FROM FAMOUS CARTOON CHARACTERS

Cartoon characters make childhood memorable and teach us some of the best life qualities, making each of us the person we are today. Let's look at some of the best cartoon quotes to inspire you more.

1. **"The things that make me different are the things that make me."**
- Winnie the Pooh, 'Winnie the Pooh'.
2. **"Yesterday is history, tomorrow is a mystery, and today is a gift...
that's why they call it the present."**
- Master Oogway, 'Kung Fu Panda'.
3. **"If you work on something long enough you will find it, even if you
are lost for a while, you will find it."**
- Professor Bombay, 'Epic'.
4. **"Believe in yourself and there will come a day when others have no choice
but to believe with you."**
- Mufasa, 'The Lion King'.
5. **"When life gets you down, do you want to know what you've got to do?
Just keep swimming!"**
- Dory, 'Finding Nemo'.
6. **"Bad days happen to everyone, but when one happens to you, just keep
doing your best and never let a bad day make you feel bad about yourself."**
- Big Bird, 'Sesame Street'.
7. **"If I'm not me, who am I? And If I'm somebody else, why do I look like
me?"**
- Popeye, 'Popeye the Sailor Man'.
8. **"There is no secret ingredient. It's just you."**
- Po, 'Kung Fu Panda'.
9. **"If you keep on believing, the dream that you wish will come true."**
- Cinderella, 'Cinderella'.

10. “Oh yes, the past can hurt. But you can either learn from it or run from it.”

- Rafiki, 'Lion King'.

11. “Your story may not have such a happy beginning but that does not make you who you are, it is the rest of it - who you choose to be.”

- Soothsayer, 'Kung Fu Panda 2'.

**Dr.M. Pandimadevi
ASP/ECE**

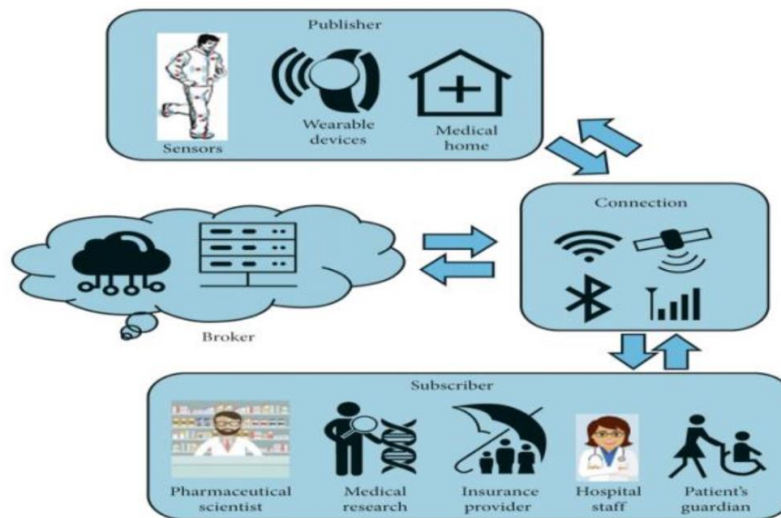
20-FACTS ABOUT TECHNOLOGY

- The 'fox' in the Mozilla Firefox logo is a red panda.
- Nokia's first product is toilet paper.
- Google's name was the fruit of a spelling mistake.
- The world's first computer mouse was wooden, not plastic.
- For every 12 million email spams, only one gets a reply.
- Wi-Fi doesn't stand for Wireless Fidelity.
- Xerox is not a verb for photocopying but is a name of a company that creates and sells xerographic technology.
- The founders of Microsoft, Apple, Facebook, and SpaceX have one thing in common—they are all dropouts!
- Google receives more than 99,000 searches every second.
- Your Apple product's warranty may be void if you smoke near it.
- The word "robot" originated from a Czech word that means "forced labor."
- Anyone can edit and modify any page on Wikipedia.
- An average person can blink seven times every minute when using a computer.
- The intense fear or dislike of new technology is called technophobia.
- The corporate giant Samsung is a leading contributor to landfill waste in 2022.
- The most common computer password is "123456."
- Apple's OS is more difficult to crack than Android system.
- The word engineer comes from a Latin word meaning 'cleverness'.
- Motorola produced the first handheld mobile phone.
- Apple were originally designing an apple shaped flip phone.

Mrs.T. Ruba,
Assistant Professor/ECE.

THE IMPACT OF IOT ON HEALTHCARE

In recent years, one of the fastest growing businesses worldwide has been healthcare. and much of this transition is being driven by technological advancements. The Internet of Things (IoT), one of the most important technological advances in recent years, has a significant impact on healthcare. The technology, also known as the Internet of Healthcare Things (IoHT) or the Internet of Medical Things (IoMT), The Technology uses interconnected devices and sensors to collect and share data. This information can improve patient care, treat chronic illnesses, and reduce expenses. IoT improves healthcare efficiency and accessibility, improving patient's health outcome. IoT in healthcare services can reduce the need for hospital visits and allow patients to be treated in the comfort of their homes.



IOT APPLICATIONS IN HEALTHCARE

- ✓ Remote Patient Monitoring
- ✓ Glucose Monitoring
- ✓ Heart-rate Monitoring
- ✓ Robotic Surgery
- ✓ Connected Contact Lenses



T.S. GURUNANTHAN,
3rd YEAR, ECE.

Dr. A.P.J Abdul Kalam's View on
"NATIONAL DEVELOPMENT AND CREATIVE LEADERSHIP"

These are the connections between creative leadership and How It can bring about national development.

- ✓ A Nation's economic development is powered by competitiveness.
- ✓ Competitiveness is powered by knowledge.
- ✓ Knowledge is powered by technology and innovation.
- ✓ Technology and innovation are powered by resource Investment.
- ✓ Resource investment is powered by return on investment.
- ✓ Return on investment is powered by revenue.
- ✓ Revenue is powered by volume and repeat sales.
- ✓ Volume and repeat sales are powered by customer loyalty.
- ✓ Customer loyalty is powered by the quality and value of Products.
- ✓ Quality and value of products is powered by employee productivity and innovation.
- ✓ Employee productivity is powered by employee loyalty
- ✓ Employee loyalty is powered by employee satisfaction.
- ✓ Employee satisfaction is powered by the working environment.
- ✓ Working environment is powered by management innovation.
- ✓ Management innovation is powered by creative leadership.

For success in all national missions, it is essential to have Creative leaders. Creative leadership involves exercising the vision change the traditional role from the commander to the coach, Manager to mentor, from director to delegator and from one who demands respect to one who facilitates self-respect. For enterprise value, we need many creative leaders.

Ponraj M
III Year / ECE B

AI vs Human (Is this a Final Battle)

We all know that today's technology development on our daily life is Unavoidable. Because we I think we guys are last generation Using Keypad Mobile and old generation. AI have seen a far growth of science in techro Medicine and everything especially AI. Yes AI, everyone says AI has an ability to achieve something bigger better than yourself. Today Most of science enthusiasts and teenagers Scared that Something AI will rule the World like a James Bond film. It fills our role in the world. But I think we need to remember the Creator of AI. We adapted ourselves generation after generation and it is not self created or created by superior powers. It will The Magic of one person (or) one team we We We Want to remember.

We can do anything in World and Scientifically many Industrialists. A I Can replace our roles AI Can do our Work, but Not Customized work and It Can't fully understand feelings and emotions Filled with Blood with Client demands and feelings through years after years. But You AI may be a good friend, Guide, Teacher. You need to Understand Well and use it properly you will learn a lot of Hand Signs Magic. But you need to know. With Use properly with Caution Many people heard about some boys in Internet Bid there are also good for life. so be open minded, accept your flaws, remember where you are, Build your future.AI can neither a protagonist nor a antagonist but a supportive character in our life

**M. Nirmal Kumar,
II Year, ECE-B.**

THE STRUGGLE OF BEING A TEENAGER

Whenever I open my social media, I find that many of my friends are uploading sad songs and quotes to their status and stories. I even used to upload sad life quotes, as if I had lived for 50+ years and seen many coloured lives. But suddenly, I had a question: why is everyone so sad? Until we reach a certain age, we don't feel sadness; we only experience happiness. But as I grew up, everyone, including myself, started to feel and express sadness at times. So, I came to the small conclusion that it's during our teenage years that we begin to experience this sadness.

Over time, life as a teenager has changed significantly. The transition from childhood to adulthood is effortless for some but challenging for others. There are numerous challenges to face, decisions to make, and paths to choose from. Depending on our preparation for these moments, we'll determine how 'ready' we are to face life.

The hardest part of being a teenager now is feeling stuck, caught between responsibilities. You're no longer a child, but you're not officially an adult either. This can be the biggest struggle we all encounter. It becomes frustrating trying to live up to the many expectations from friends, family members, and sometimes even their friends. We find ourselves in a stage of life where we're expected to be responsible young adults, yet we're not allowed to do as much as adults can. It's challenging to be expected to act like an adult when all adults see in you are a child trying to become someone they can't be just yet.

We also struggle with completing tasks when needed, which can often get us into trouble. Many adults automatically expect us to do things exactly as they want and to act as they did, but they don't understand that we were raised differently. Times have changed compared to 30 years ago when our parents were teenagers. Back then, technology wasn't as convenient, so they had more time away from phones, laptops, and TVs. They interacted face to face more and were always busy, whether inside or outside of the house. Nowadays, we are glued to our gadgets, and face-to-face interaction has been compromised in favor of text or video calling straight from our phones. Losing this has taken a toll on our generation.

The best part of being a teenager is being able to find things at the click of a button. Teenagers now can easily connect with each other at the click of a button. With the advancement of technology came faster and more efficient access to knowledge. Although there are still many struggles of being a teenager now, the advantages of the present outweigh them all.

Yes, teenage life is hard. I agree that advancement and technology can't bring us happiness. However, most of the suffering in our teenage years is self-inflicted, not caused by others. So, we are the reason why we are sad and why we are happy. Teenage life is a precious thing, and if attachments hurt, then don't get too attached. As I said, not only teenagers. life but life itself is precious; we are unsure about the next second. It's okay to break down and cry aloud; that's how you learn life lessons. But make sure that you rise and smile wholeheartedly. I emphasize 'wholeheartedly' because sometimes we cry in our hearts but put on a big smile on our faces. Between the ages of 18, 19, 20, and 21+, you may lose friends, make mistakes, fall, fail, realize things, confront reality, lose yourself, but in the end, you find yourself and become even stronger than before. Also, prepare yourself to be strong enough to survive on your own. Remember, life is not easy; teenage years are just a trailer. Never give up; everyone has bad days. Pick yourself up and keep moving. Remember, pain is inevitable, but suffering is an option."

If you are a Poster, then do hear Podcast 'This Teenage Life' of Molly Joseph

NANDHINI N
III Year, ECE-B

WHO AM I?

"Has everyone here ever asked themselves, 'Who am I really?' This question is often considered life's most defining question. Personally, I've had this hypothetical question since my childhood but found it challenging to search for an answer. The question itself raises more questions: Can I ever truly know who I am? Why do I need to know who I am? Will any answer ever satisfy me? This frequently asked question suggests that there might actually be a possible answer, almost as if our being were a fixed thing.

Typically, we find ourselves struggling with our identity and seeking a core sense of self. Ironically, the more we seek to identify who we are, the more fragile our self-esteem can become. There might be an inverse correlation between the frequency of asking this question and the ease with which we experience life. As living beings, we yearn for and find comfort in a solid sense of identity; it grounds us and boosts our confidence. Our sense of identity influences every aspect of our lives, from the choices we make to the values we live by. Our identities often serve as avatars for the values and principles we hold, reflecting what we believe, what we do, and what we value.

While we all come from the same place and are made of the same stuff, each of us sees ourselves as unique individuals. 'Who am I?' is an introspective exploration of this idea, a deep dive into the multitude of facets that make up each of us, seeking to discover who we truly are once all external factors are stripped away. But what truly defines a person? Is it our name, our place, our possessions, our gender? Ultimately, we discover that it's the combination of these elements that shapes who we are and that people, at their core, share fundamental dreams, feelings, and fears. However, you remain uniquely yourself; you are your thoughts and feelings that define you.

So, I had many questions about the question 'Who am I?' If I am not my name, my place, my possessions, my gender, my skin colour, my

muscles, my bones, my guts, my senses, my thoughts, or my feelings, then who am I? All our identities and everything we believe ourselves to be depend on something else. So, who are we then? Until we know the answer to the question 'Who am I?' we keep creating new identities for ourselves, which can take us further away from our true selves. Personally, I believe that much of the suffering in life stems from not knowing our true identity. We are all given names and possessions after our birth, but who are we without these external factors?

Our identity should be viewed as an ongoing process. Instead of a static snapshot, we should embrace a fluid sense of self, continuously reframing, reorganizing, rethinking, and reconsidering ourselves. In conclusion, we are our truest selves. It makes perfect sense to seek a deeper understanding of ourselves. Being intimately aware of our thoughts, feelings, hopes, and fears is advisable. The key is to see our sense of self as malleable, more like a willow tree as a sturdy oak. The willow is flexible and survives storms by bending with the wind, while the rigid oak is more likely to crack.

So yes, I am unique, I am special, I am me! 'There is nothing to prove and nothing to protect. I am who I am, and it's enough.' In life, there are some questions that don't have precise answers. If an answer satisfies you, it's enough; it doesn't necessarily have to be the correct answer because life is short. Live your life to the fullest and enjoy every moment."

**NANDHINI B,
III Year, ECE-B.**

THE FUTURE OF MANUFACTURING: **A DEEP DIVE INTO 3D PRINTING**

In Recent Years, the world of manufacturing has been undergoing a profound transformation, and at the heart of this revolution is 3d printing. also known as additive manufacturing, 3d printing has rapidly evolved from a niche technology to a game-changing force with far-reaching implications for various industries. in this article, we will explore the fascinating world of 3d printing, its applications, and its potential to reshape the future of manufacturing. 3d printing is a manufacturing process that creates three-dimensional objects by adding material layer by layer. unlike traditional subtractive manufacturing methods, where material is removed from a solid block to create a final product, 3d printing starts with nothing and gradually builds up the desired object. This additive approach allows for incredible design flexibility and complexity, making it possible to create intricate shapes and geometries that were previously unimaginable.

The concept of 3d printing dates to the 1980s, but it wasn't until the early 2000s that technology became accessible and affordable for a broader range of industries. the advent of desktop 3d printers and the expiration of key patents paved the way for innovation. today, 3d printing is utilized in fields as diverse as aerospace, healthcare, automotive, fashion, and art. while 3d printing holds immense promise, it also faces challenges. the materials used in 3d printing need to become more sustainable and diverse, and the technology must become faster and more affordable for broader adoption. intellectual property concern and regulatory issues surrounding 3d printing are also areas that need attention.

Looking ahead, it's clear that 3d printing will continue to disrupt traditional manufacturing processes. as the technology matures, we can expect to see greater integration into industries, increased customization in products, and further advancements in bioprinting and nanoscale 3d printing. the future of manufacturing is undeniably being shaped by the limitless possibilities of 3d printing. One of the remarkable aspects of 3d printing is its potential to reduce waste and energy consumption in manufacturing. traditional methods often involve cutting away excess material, leading to significant waste. in contrast, 3d printing

only uses the material required for the object, minimizing waste and lowering carbon emissions. Additionally, local production using 3d printers can reduce the need for long-distance shipping, further decreasing the carbon footprint. In conclusion, 3d printing has emerged as a transformative force in manufacturing, enabling innovation across various industries. its potential to reduce waste, lower costs, and foster creativity makes it a technology with a bright future. As we continue to unlock its potential, the world of manufacturing will evolve in ways we can only begin to imagine.

**M.Ajay Kumar,
III Year, ECE-A.**

Message for “ Youth” From Dr.A.P.J Abdul Kalam

1) DREAM

- You must dream before your dream can come true.
- The great dreams of great dreamers are always transcended.

“Dreams are not those Which comes while We are sleeping, but dreams Are those, when you don’t Sleep before fulfilling them”.

2) DIFFICULTY

- Life is a difficult game. You can win it only by retaining you Birthright to be a person.

“Difficulties in your life do not Come to destroy you, but to help you. Realize Your hidden potential and power Let difficulties! known that you too are difficult”.

3) WORK, KNOWLEDGE, AND THINKING

- Thinking is progress.
- Non-thinking is stagnation of the individual, organization, and the country.
- Thinking leads to action.
- Knowledge without action is useless and irrelevant.
- Knowledge with action converts adversity into prosperity.

“Thinking is the capital; Enterprise is the way and Hard work is the solution. All of us do not have equal talent. But all of us have an equal Opportunity”.

“To develop our talents Some of the brightest mind in the country can be Found on the last benches of the classrooms.”

4) BELIEVE THAT YOU CAN FLY

“I will fly I am born with Potential I am born with goodness and trust I am born with ideas and dreams I am born with confidence I am born with wings I am not meant for crawling I have wings I will fly, I will fly, will fly”.

Dr.A.P.J Abdul Kalam message, especially to young people is to have courage to think differently, courage to invent, to travel the unexplored path, courage to discover the impossible and to conquer the problems and succeed. These are great qualities that they must work towards. We will be remembered only if we give to our younger generation a prosperous and safe India, resulting out of economic prosperity coupled with civilizational heritage. Educationists should build the capacities of the spirit of inquiry, creativity, entrepreneurial and moral leadership among students and become their role model.

5) SUCCESS :

Those who cannot work with their hearts achieve but a hollow, half-hearted success that breeds bitterness all around. The country does not deserve anything less than success from us. Let us aim for success.

6) ATTITUDE TO VICTORY:

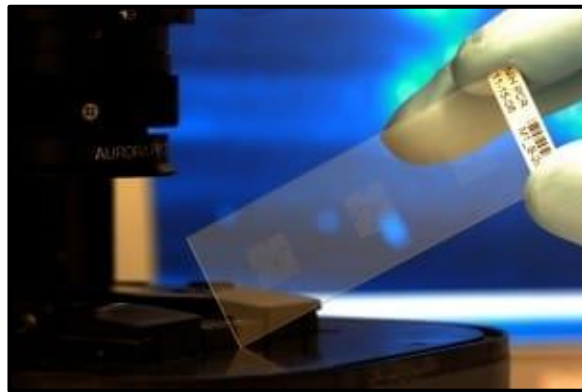
Don't take rest after your first victory because if you fail in second, more lips are waiting to say that your first victory was just luck.

“All Birds find shelter during rain, But Eagles avoid rain, By flying above the clouds, Problems are same for all, But attitude make the difference!!”

**Dinesh S
III year / ECE C
Siva B
III year / ECE C**

LAB-ON-A-CHIP TECHNOLOGY

A lab-on-a-chip is a miniaturized device that offers the solution of conducting multiple-sample biological and biochemical analyses in a single platform. Research on lab-on-a-chip focuses on several applications, including human diagnostics, DNA analysis, and, to a lesser extent, chemical synthesis. Thus, lab-on-a-chip emerges as a promising diagnostic tool as the miniaturization of biochemical operations reduces costs, parallelizes operations, and increases diagnostic speed, sensitivity, and accuracy.



Microfluidics and lab-on-a-chip

Microfluidics is both the science and application that manipulate picoliters of fluids and manufacture microminiaturized devices and is the core technology behind lab-on-a-chip. It can integrate millions of microchannels, each measuring mere micrometers, on a single chip that fits in your hand. This process enables the efficient handling of small volumes of fluids (e.g., reagents for biochemical reactions).

Lab-on-a-chip is a microfluidic platform that integrates various laboratory operations such as biochemical analysis, chemical synthesis, or DNA sequencing. Thus, lab-on-a-chip devices are not just a collection of microchannels, complete lab-on-a-chip diagnostic systems require integrated pumps, electrodes, valves, electrical fields, and electronics. Nowadays, various flow control instruments can be used to create a full lab-on-a-chip system.

K.Subulakshmi,

AP/ECE.



POEMS



அப்பா

உனது உயிர் தந்து
என்னை காக்கும் எனது மூச்சே!!
அழும் முன்னே தீ
அணைக்கும் அன்னையாய்!!
காவல் நிற்கும் கடவுளாய்!!
சிரிக்க மறந்த வேளையில் கூட
எனக்காக மட்டுமே சிரிக்கும் சிகரமாய்!!
நான் சொல்ல மறந்த
கதையில் கூட ராஜாவாய்!!
எனக்காக மட்டுமே
வாழ நினைக்கும் நிஜமாய்!!
எனது கனவுகளை
நிஜமாக்கும் நிஜமாய்!!
நீ சுமந்த நாட்களை கூட
மறந்து என்னை மட்டும் நினைத்து!!
உயிருக்கு உயிராய் !!
ஆயிரம் உறவுகள் வரலாம்
உன்னைப் போல் ஓர் உறவு வரமாய்!!
இந்த ஜென்மத்தில் இழந்த
அனைத்தும் திரளாய்
கிடைத்தது எனது தந்தை
எனும் கடவுளாய்!
மறுஜென்மம் உண்டென்றால்
தந்தை வரமாய் உனைமட்டும்.

முனைவர்.ரா.தமிழ்செல்வி,
பேராசிரியை,ECE.

அன்னை

பத்து திங்கள் சுமந்தாய் என்று
சொல்வது தவறு !!

நான் அன்னை என்று ஆன பின்னும்
எனை சுமக்கும் சுமை தாங்கியே !!

நான் சிரித்தால் மட்டும் 'சிரிக்கும் உறவு!!
உறக்கம் இல்லை!!

ஆனால் விழிகளில் நான்!!
இமை மூட மறந்தாய்!!

உனை விடவா தெய்வம் ஒன்று உண்டு
உண்ணும் நிலை வந்தால்
எனது பசி மட்டும் அறியும்
நீ அல்லவா அண்ணபூரணி!!

உயிர் தருபவள் கடவுள் என்றால்
உன் உயிர் தந்து என் உயிர் தந்த நீ கடவுளின் கடவுள்
கோயில் இல்லை உனக்கு
ஆனால் ஆலமரமாய் நீ!!
உன் நிழலில் நான்.

முனைவர்.ரா.தமிழ்செல்வி,
பேராசிரியை,,ECE.

INTELLECTION TOWARDS IC

Microchip (the eternal power) are the one that controls all the I/P of my microcontroller (heart)

They (IC) thrust me out of my power over the threshold to resist in my stability

At times,

They filter my carried away thoughts acting as a phase shifting technique

They preserved me from my errors acting as a carried away frequency

The virtual machine who compiles me to execute my output (success)

The precision current regulator who control s and convert s my -Ve to +Ve

No more logos and passwords to circumscribe,

You'll be my CFL to enlighten the universe of my vim (life).

Dr.M. Sheik Dawood

Prof./ECE

T.Anish Sulthana

PG Student/COS

தமிழ் கவிதை

நகமும் சதயுமாய்,
உயிரும் உடலுமாய்,
பூவும் நாறுமாய்,
மேசமும் வானமுமாய்,
இசையும் நடனமுமாய்,
காயும் கனியுமாய்,
மரமும் காடுமாய்,
உணவும் ருசியுமாய்,
மையும் எழுதுக்கோலுமாய்,
நட்பும் காதலுமாய்,
வாழ்நாள் முழுவதுமாய்,
என்றும் என்னுடன் இருப்பியாய்,
அன்னை தமிழே....!!!

- கு.முகிலன்

காதல்

வீசும் தென்றவிடம் உன்னை அழைந்து
ஓடும் நதிக ளை சில்லென கடந்து
ஆடும் மரங்களின் நடுவில் நுழைந்து
ரிங்காரமிடும் வண்டுகளில் இனரந்து
பாடும் குயிலின் இசையை கேட்டு
தூரம் நம்மை பிரித்து வீடினும்.
மறவாத நம் காதலை சேர்க்க தமிழ்
மொழியில் இசைக்கிறேன் கனிமொழியே !

வறண்ட நிலமாக இருந்த என் மனதில்
கரு மேகமாய் சூழ்ந்த என்னவள் மழை,
நிரை பொழித்து இதமான தென்றலை வீசி
தீகைக்கு சென்றான் பசஞ்சோலை யாக்கி!

இருள் சூழ்ந்த இரவில் நிலைதடுமாறிய என்
கண்களை "மேகங்களின் நடுவில் நிலவென
பிரகாசித்த சகியே உன்னை தொட்டு
பார்க்க வருகிறேன் ஒலியாக ஏன்
கண்மணியே!

- செ.இ.சங்கர்

நல்லதோர் வீணை!

நல்லதோர் வீணை செய்தே -அதை
நலங்கெடப் புழுதியில் எறிவதுண்டோ,

சொல்லடி சிவசக்தி - எனைச்
சுடர்மிகும் அறிவுடன் படைத்துவிட்டாய்

வல்லமை தாராயோ - இந்த
மாநிலம் பயனுற வாழ்வதற்கோற

சொல்லடி சிவசக்தி - நிலச்

சுமையென வாழ்ந்திட புரிகுவையோ?

விசையுறு பந்தினைப் போல - உள்ளம்

வேண்டிய படிசெலும் உடல் கேட்டேன்

நசையுறு மனங்கேட்டேன் - நித்தம்

நவமெனச் சுடர்தரும் உயிர் கேட்டேன்

தசையினைத் தீசுடினும் - சிவ
சக்தியைப் பாடும்நல் அகங்கேட்டேன்

அசைவறு மதிகேட்டேன்; இவை
அருள்வதில் உனக்கெனும் தடையுளதோ?

-ர.ரகு

FRIENDSHIP

In the garden of bonds, friendship blooms bright,
A tapestry woven with love and light.
Through stormy weather or clear skies above,
True friends stand strong, a treasure trove.
Laughter shared and secrets confide,
In each other's hearts, we always confide.
A beacon of trust, a pillar so tall,
Friendship, a treasure, cherished by all.
Hand in hand, we weather life's art,
United in love, never apart.

S. Yuvaraj,
II year, ECE-A.

SELF MOTIVATION

"The seed does not sprout without knocking"
"The idol does not knock Statue is impossible! "
"Without trying how the success will happens ,
What is impossible if you try"

பத்து முறை விழுந்தவனிடம் முத்தமிட்டு சொன்னது பூமி
!ஒன்பது முறை எழுந்தவன் அல்லவா நீ!

C. Sanjay
III year, ECE-C.

DECISION MAKING

Decisions are hard to make, Every time there's more to take,
Choices are there lots of; So, it's your obligation to take off!
Wage a war against the devil, It will make it hard for others to believe.

Life is full of restrictions, Overcome it with a good vision.
Take your decisions with good intention And strong determination.
Right decision will be made, Evil deeds are left behind.

Noble art of decision making is an adaptation of an orderly Assemblage
the data;

Throughout your quota.
Life is in need of revisions
Due to bad decisions towards good intentions.

None to be left alone. Since good decisions are your own.

“Make good decisions for good intentions.”

Vishnu R
III yr / ECE C
Sriram V
III yr / ECE C

COLLEGE LIFE

In the campus buzz, dreams take flight,
Day and night, a symphony of light.
Books and lectures, friendships so dear,
Adventures waiting, far and near.
Dorms alive with laughter and cheer,
As we navigate this journey, year by year.
Challenges faced, lessons learned,
In the book of memories, pages turned.
Oh, college days, a vibrant ride,
Where we embrace the tide, side by side.

**PERINBA PRABHU S,
II year, ECE-B.**



DEPICTIONS





**Mrs.T.Ruba,
AP/ECE.**



**K. Alagumeenakshi,
2nd year,ECE.**



R.V.Bhavishiya, 2nd year, ECE.



A.Jaffarunnisha, 2nd year, ECE.



V.Rohini, 2nd Year, ECE.



M. Nirmal Kumar, 2nd year, ECE.



Shafia Firose M, 3rd year, ECE



B.Harshini ECE- A, 3rd year, ECE.



V.Rohini, 2nd year, ECE.



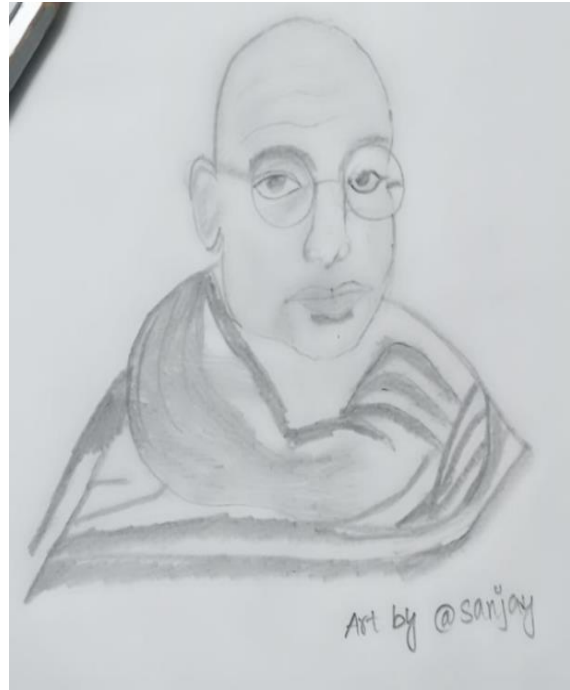
G. Stenee Maria, II Year, ECE.



G Revathy, 2nd year, ECE



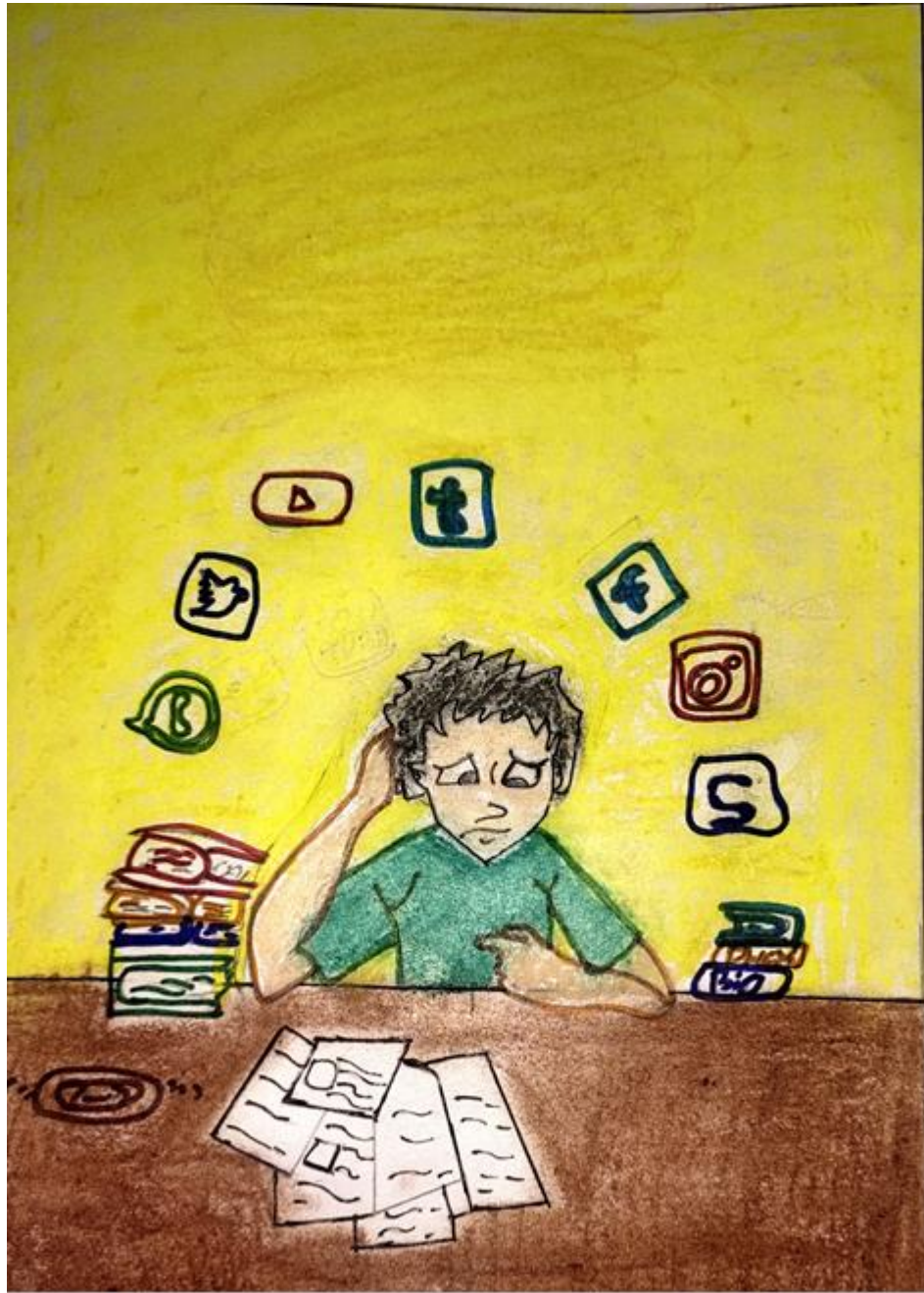
Harshini B, 3rd Year, ECE



Sanjay, 3rd Year, ECE.



Shaalini J, 2nd year, ECE.



Dr.M.Fathu Nisha, AP/ECE.



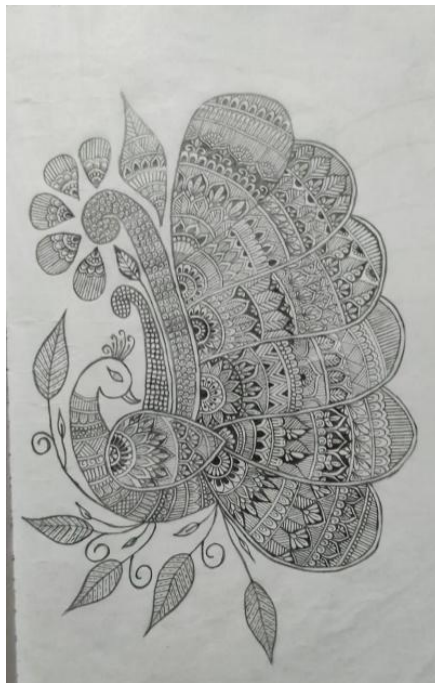
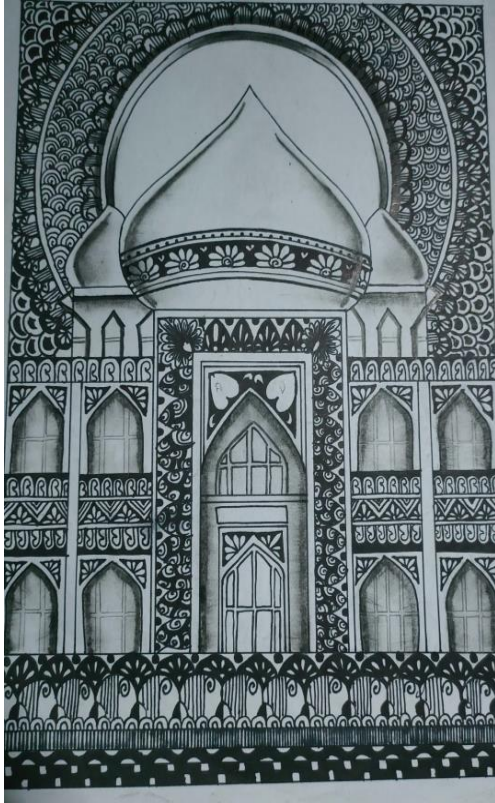
Vishnupriya.A.V, 2nd year, ECE.



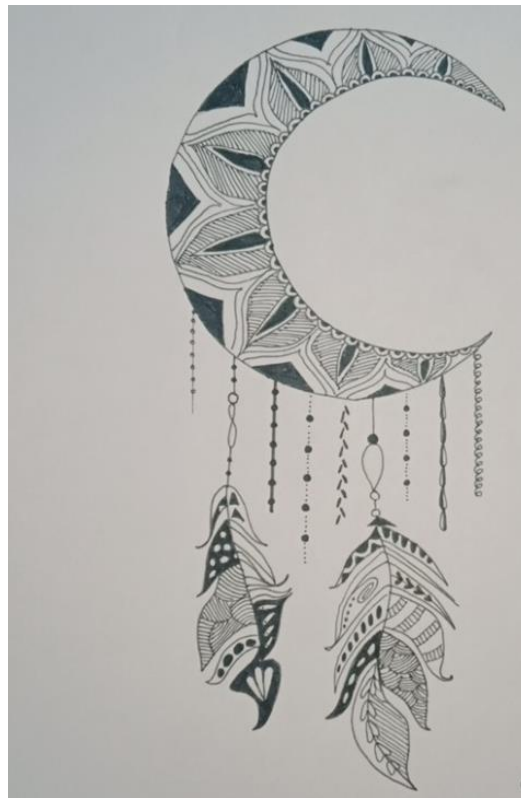
N Mahalakshmi, 3rd Year, ECE.



S Pavithra, 2nd year, ECE.



S. Raja Rajeswari,
2nd year, ECE.



S. Enia Revathi,
2nd year, ECE.