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CRES ECE MINDS

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



B.S. Abdur Rahman
Crescent
Institute of Science & Technology
Deemed to be University u/s 3 of the UGC Act, 1956





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From Vice Chancellor's Desk

DR. A. PEER MOHAMED
VICE-CHANCELLOR
B.S. Abdur Rahman Crescent
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George Bernard Shaw once said, “Life isn’t about finding yourself. Life is about creating yourself” and with regard to the above quote The Department of Electronics and Communication Engineering has brought forth this magazine “Cres ECE Minds” 2nd edition which showcases the efficiency of the students ‘interest and innovations.

The articles in this magazine will definitely inspire and motivate people of all ages The magazine is also a proof that even at our lowest point we are open to the greatest change and sometimes a ray of hope is all the sunshine we need.

From the Registrar's Desk

DR. A. AZAD
REGISTRAR
B.S. ABDUR RAHMAN CRESCENT
INSTITUTE OF SCIENCE &
TECHNOLOGY
CHENNAI - 600048



I feel happy to inaugurate the magazine's second edition brought by the students with the help of Staff coordinators from the Department of Electronics and Communication Engineering. I am delighted to be a part of this inauguration and I wish all the faculties and students who had put their full potential to bring out this magazine in a very efficient and crispy manner. My blessings and wishes for their future endeavors

From the Dean's Desk

DR. D. NAJUMNISSA JAMAL DEAN/SECS
B.S. ABDUR RAHMAN CRESCENT
INSTITUTE OF SCIENCE & TECHNOLOGY
CHENNAI - 600048



" A DREAM IS NOT THAT WHICH YOU SEE WHILE SLEEPING IT IS
SOMETHING THAT DOES NOT LET YOU SLEEP "

- DR. A P J ABDUL KALAM

The above quote suits the Electronics and Communication Engineering department as it best describes our aim in taking the department forward. The ECE department, over the years, perfected the ability to aim high and embrace excellence by the Head of the department and the team of faculty members and students. Regularly the department builds intellectual prosperity to influence success in academics, quality placements, research, and development. It is worth mentioning that the department has well-established bondage with industries and developed affiliates. They strive to train and equip their students to get placed in top multinational corporations by polishing the talent hidden in them. I believe strongly that the challenges can be confronted and resolved by presenting their achievements and skills through this magazine. The onward march in the field of technical education and research continues every day, pushing us forward to reach greater heights. Tomorrow is too late, yesterday is over, and now is the perfect moment to start! I extend my warmest wishes to both the students and faculty members of the Electronics and Communication Engineering department and wish them success on their initiative.

From the HOD's Desk

DR. C. THARINI
PROFESSOR AND HEAD ECE DEPARTMENT
B.S. ABDUR RAHMAN CRESCENT
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CHENNAI - 600048



It is with great pleasure and pride that I peruse the pages of the ECE department magazine, in the illustrious annals of this department. I laud the Editorial board for bringing out the magazine on schedule, which is no small achievement in itself considering the time and efforts that have gone into it. The field of Electronics and Communication is at the forefront of innovation today, charting new territories. Engineering education also has kept pace with the advancements. This magazine succinctly captures the essence of the technological advances and innovation happening in this area. It highlights the achievements of the students and faculty and poses interesting research questions for future generations of students.

The creativity, innovation, and tireless pursuit of the students and faculty are showcased beautifully for the benefit of students and the general public alike. I applaud the editorial team for the hard work and dedication they have invested in realizing this goal and wish my dear students success in all future endeavors. I also encourage the forthcoming batches of students to continue the great work that has been started today and to emulate the achievements of their seniors.



TECHNOLOGY UPDATES



But, as the idiom goes, "All good things must come to an end", Artificial Intelligence also has a negative side. A census shows that humans will be outnumbered by robots in the next 30 years. AI could easily replace humans, leading to huge unemployment. Artificial intelligence lacks the kind of experience and creativity, that humans have.

This will eventually lead to a decrease in human value. If we are going to create the most intelligent system by using his creativity and intelligence, then our fate will be decided by superintelligence.

A conclusion to all these arguments would be "be careful about what you wish for!".The fate of humanity lies in the way he utilizes technology. We have to design Artificial intelligence in a way that will not only create a destiny but also protects one from its destruction.



EDU TECH – "THE ARTIFICIAL INTELLIGENCE"

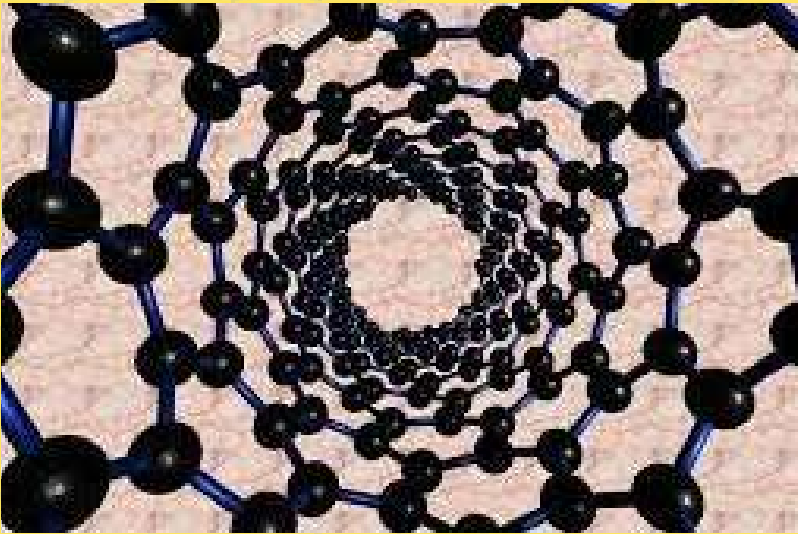
by Sriya Samanvita. M
1st Year



The nature of humans is to find the reason behind every single thing which awes them. From the early 20th century, we involved ourselves in creating machines with the ability to do human works like calculating, researching etc. This eventually lead us to the discovery of computers, it was also our first footprint into a world called Artificial Intelligence.

Artificial Intelligence is the intelligence resulting from machines. It is a combination of computer science, physiology and philosophy. AI means the ability of computer systems able to do tasks that normally require human intelligence.

The key benefit of AI over humans is that it doesn't require rest as we do, nor does it have the risks of getting bored of doing repetitive tasks.



NANOTECHNOLOGY IN MEDICINE

by Saniya Mirza
3rd Year



Nanotechnology is the manipulation of matter at the atomic and molecular scale to create materials with new and varied properties. It can revolutionize medicine in various aspects like drug delivery, gene therapy, diagnostics, clinical application and as well as Biomimetic, where biological processes are imitated using nanotechnology to engineer and improve new methods. Several applications are already in the making, for example:

- Nanoparticles can be employed to deliver drugs, heat, light or other substances to specific types of cells. Particles are engineered to attract diseased cells, allowing for their immediate treatment.

- Nano factories are currently being tested, which can make protein-based drugs and deliver them directly to specific sites in the body without having the particles go through the laborious process of consumption and breaking down.
- Synthetic platelets developed using polymer nanoparticles could be used to reduce blood loss in patients with severe internal bleeding.
- DNA manipulation can be used to stretch out a section of DNA to be examined or operated on. 'Nano robots' can also be used to carry out repairs inside the cell components.
- Nanofiber meshes can be synthesized to integrate with the body's tissues thereby repairing injuries to the brain or spinal cord or even reducing post-op complications.

In short, nanotechnology will soon introduce wonders into the healthcare system. Today's technology is on the brink of revolution and it is quite surprising how little we know of it. Take a look into the possibilities of nanotech that I've listed. Imagine how fascinating the world we live in is. Then, imagine how much more we are yet to be surprised by.



MILITARY EXO-SKELTON

by S. Venkatesh
2nd Year



Exoskeletons are wearing devices that use mechanical levers to divert the burden carried by soldiers to the ground.

The suits, which are designed to fit around a dismounted soldier's body to offer them near-superhuman capabilities, can be worn onto a soldier's body to boost physical qualities like strength or endurance, giving them significant advantages in combat and logistical chores.

SYSTEM PURPOSE:

Soldiers will have to increase the frequency and duration of their pedestrian displacements shortly as wars take place more and more in urban contexts, with the targeted regions being difficult or impossible to reach by vehicle.

Current designs, including Raytheon's XOS exoskeleton and Lockheed Martin's human universal load carrier (HULC), have shown significant improvements in strength, allowing soldiers to carry loads of up to 200 pounds for lengthy periods.

This might allow soldiers to load ammo onto a variety of military vehicles without the use of heavy-lift technology, as well as easily move barriers on the battlefield.

Soldiers would be able to run longer distances with less strain because of the use of powered titanium legs to transmit the weight to the ground.

WHERE DOES IT COME FROM AND HOW DOES IT WORK?

Lockheed Martin and Ekso Bionics collaborated on the human universal load carrier in January 2009 under an exclusive licensing arrangement (HULC).

HULC is an anthropomorphic exoskeleton that is untethered, hydraulically powered, and meant to fit around a dismounted soldier's body. The system's adaptable architecture allows for little to no movement limitation, which is critical for warfighters in the field.

Instead of a joystick or control mechanism, sensors detect movement and, with the help of an inbuilt microcomputer, cause the suit to move in lockstep with the body. The titanium construction and hydraulic power of the system improve the soldier's ability, strength, and performance, while the modularity of the system allows for quick component swapping and replacement.

WHAT DOES IT DIFFERENTIATE:

The following are some of the potential direct and indirect benefits for Armed Forces from the use of Exoskeletons:

- >On the modern battlefield, superiority and domination
- Threats to national interests and technological advantage over near-peer competitors
- >More operational preparedness
- >Medical costs are lower.
- >Costs of rehabilitation are lower.
- >Costs of deployment are lower.



There is a decline in socialisation in learning, especially due to the Covid 19 pandemic and countless reports show us that students lack certain skill sets because of the lacking of socialisation. There is a great need for these soft or transversal skills. The metaverse can create high levels of socialisation in learning. Metaverse can be a place where we just don't get to learn practical, applicable skills but can learn to apply these to a social environment

The Metaverse could also address the issue of physical infrastructures in offering STEM education. Instead of buying expensive learning objects, they can be made available in the digital world for 1% of the cost.

How will metaverse implement these ideas?

Augmented reality: This basically involves the creation of a smart environment through utilizing location-based technology and networks. It helps in creating a digital overlay over real-world objects according to your desired specifications.

Lifelogging: It's the technology for capturing, storing, and sharing information and everyday experiences with people and objects. Lifelogging focuses on the use of augmented technology. Apple Watch and Samsung Health are prominent real-world uses of lifelogging.

Mirror World: it is a specific type of simulation of the external world, which is actually an enhanced virtual counterpart of the real world.

Virtual reality: It is another significant aspect of the metaverse. You can think of virtual reality as a digital space developed by using digital data from interaction activities between avatars and the environment itself.

The educational implications of these four aspects serve crucial implications in the metaverse for transforming conventional approaches to education and learning.

EDUCATION: THE METAVERSE WAY!

by *Shafeeq Ahamed*
3rd Year



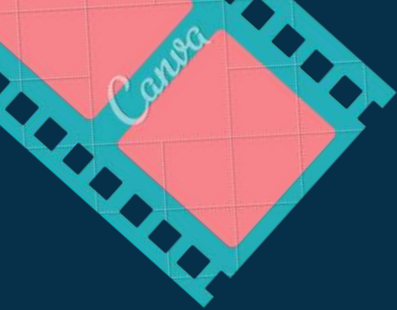
Over the last few months metaverse has become the new Buzz word in the tech community. Metaverse is a virtual environment where we can be present with people in virtual spaces. It feels like being inside the internet. Metaverse is gradually evolving various sectors, especially gaming and social life.

How will metaverse change education?

Metaverse can address various issues which current day education is facing. It could possibly implement the idea of 'transparent accreditation'. It is a really effective way of looking at students' learning techniques, skillsets and individual needs.

Transparent accreditation recognises that all students learn differently and thus have different concentration spans. The classic classroom environment doesn't work for everyone, and people particularly find it less engaging. The Metaverse has the advantage here; it possesses the same technological qualities that draw us to gaming, TV and other means of entertainment.

MOVIE BREAKDOWN





TERMINATOR 2

by Sai Akshay, 3rd Year



Terminator 2: Judgment Day (1991) aka T2 is an American science fiction action film produced and directed by James Cameron, who co-wrote the script with William Wisher. The film stars Arnold Schwarzenegger, Linda Hamilton, Robert Patrick, and Edward Furlong. The plot is: Two future artificial intelligence agencies from 2029 send a Terminator back to 1997 to kill the future leader of the human resistance, John Connor (the protagonist) when he is a child. The resistance squad from the future sends back its own reprogrammed Terminator to protect Connor and ensure the future of humanity.

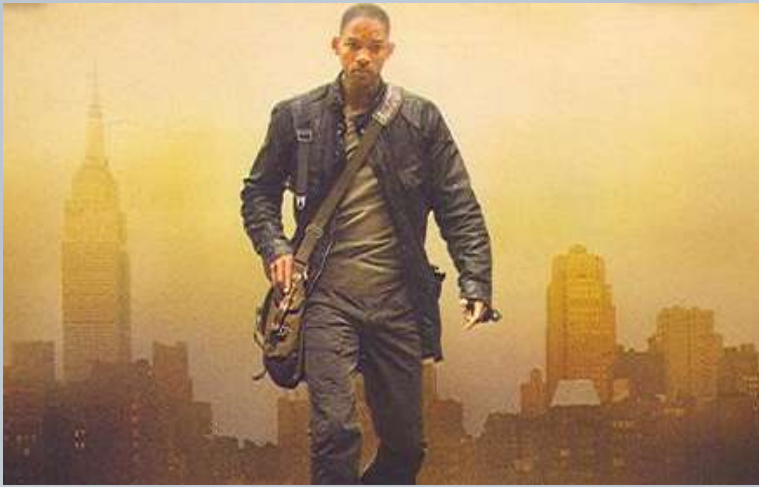
This film makes extensive use of **computer-generated imagery (CGI)** to realistically create the T-1000. T-1000 had a mimetic poly-alloy liquid metal kind of structure; this character could become anything it touches/sees (except the ranged weapons like guns). The creation of the visual effects cost \$5 million and took 35 people, including animatronic engineers, computer scientists, technicians, and artists, ten months to produce, for a total of 25 man-years. The technical achievements in CGI won the visual effects team the 1992 Academy Award for Best Visual Effects.

For the heroine's nuclear nightmare scene, art directors of 4-Ward Production constructed a cityscape of Los Angeles using large-scale miniature buildings and realistic roads and vehicles. The art directors, having studied actual footage of nuclear tests, simulated the nuclear blast with air mortars to knock over the intricate cityscape.

Speaking of the future, the reason the robots in the post-apocalyptic flash-forward at the beginning of Terminator 2: Judgment Day look real is because they are the SFX team spliced practical footage of large scale, automated models with that of actors in military garb to create a near-seamless depiction of futuristic warfare.

The director of the movie used **motion capture technology** extensively to capture the moments of the antagonist terminator. The antagonist terminator would always get a liquid metallic whole in his body whenever he gets shot by a person. The antagonist was needed to wear a bodysuit weighing 18 kg.

The film has an out-and-out digital sound mixing and they've used a **digital-to-analog converter** for getting live sounds of robots. The audio samples are recombined to form a continuous flow of sound. A crystal clear special effects and the crispy screenplay of this film make us be at the edge of the seat eventually getting entertained.



I AM LEGEND



by Sai Akshay, 3rd Year

I AM LEGEND is an American Sci-Fi Thriller directed by Francis Lawrence from a screenplay by Akiva Goldsman and Mark Protosevich. This film is loosely based on a novel of the same name, published in 1954. The film stars Will Smith as the US Lieutenant Colonel turned Virologist. The plot of this movie is extremely relatable to the current scenario of Covid-19. Inhabitants of New York City are highly affected by a virus and all are set to vacate the place to a better virus-free zone. Protagonist Will Smith who's immune to the virus stays in New York City intending to cure the infected people.

An immediate effect of the virus is that people who've gotten infected by the virus turn into predators and start hunting virus-free people. Will Smith tries to develop a cure and test it on the infected rats. Along the course of the movie, he ends up curing the predators alongside the lead woman who narrates all the incidents after two years to the survivors, telling the world that she is a legacy of Smith and that he was the sole reason for the recovery of all the remaining people.

A week into filming, Francis, the director, felt that the infected predators portrayed by actors wearing **prosthetics** were not convincing. This led to the **use of CGI** resulting in increased budget and extended post-production. The concept behind the infected was that their adrenal glands were open all of the time and they had to be constantly hyperventilating, which could not be done by actors continuously. "The film's producers and sound people wanted the creatures in the movie to sound somewhat human, but not the standard," so the screams and howls of the infected were provided by Mike Patton, lead singer of Faith No More.

Additionally, **CGI** was used for the lions and deer in the film, and to erase pedestrians in shots of New York. People in the background, spectators, and moving cars in the distance were all removed. In his vision of an empty New York, the director cited John Ford as his influence: "We didn't want to make an apocalyptic movie where the landscape felt apocalyptic. A lot of the movie takes place on a beautiful day. There's something magical about the empty city as opposed to dark and scary that was the ideal that the cast and crew wanted."

CREATIVE WRITING



SELF-DELUDING TECHNOLOGY

by Sriya Samanvita. M



PEOPLE ARE STARING, BLINKING AT RECTANGULAR LIGHTS
HOW COULD THIS DEVICE BRING YOU TO SUCH HEIGHTS?
HAVE YOU BECOME TIRED OF LOOKING AT THE LUMINARY STARS?
WHILE YOU CHECKED THE FLASHING, BATTERY BARS?

TECHNOLOGY MADE MOUSE INTO A DIRECTION POINTER,
MADE APPLE INTO A MULTINATIONAL COMPANY,
MADE GALAXY INTO CYBERSPACE,
MADE COPY AND PASTE, A TEXTUAL PROCESS.

TECHNOLOGY MADE REALITY, VIRTUAL
WHERE NATURE IS MADE IN EFFECT SO GRAPHICAL
CONVERSATIONS HAVE GONE DIGITAL
IDEOLOGIES ARE ANIMATED - ALGORITHMICALLY CONCEPTUAL.

TECHNOLOGY MADE US NEAR; BUT BROUGHT US FAR
TECHNOLOGY MADE US DEVOTED TO LAPTOP, MOBILE WAR
TOO ATTACHED WITH THE FOUR-SIDED SCREEN,
WE THEN FORGOT THE NATURAL AMAZING SCENE.

WE BECAME SLAVES OF THE INTERNET
ATTACHED ONLY WITH THE BINARY STRING, HUMANITY THEN PIXELATED
NO MORE LIKES FOR THE FLOWERS AND BLUE SKIES
NO MORE SHARE FOR THE BIRD THAT FLIES

EUPHORIC IS TECHNOLOGY
WHILE HE ENGINEERED A HUMAN-ROBOT, UNINTENTIONALLY
HE SENT YOU LIFE, ELECTRONICALLY
SENSATIONS ARE DISPLAYED WITH HIS EMOJI!

REPLICA

by S.R Parvez Riswan Mohamed,
3rd Year



I woke up startled by the sound of thunder. Continuous streaks of lightning illuminated the otherwise dark room. The sound of raindrops pattering on the window echoed around my room. I got out of my bed and opened the window to let the cold air come inside. I switched the light on but it wasn't working. The power was out. I walked slowly to the kitchen to have a glass of water. Suddenly, the doorbell rang.

I wasn't expecting any visitors today, especially not in the middle of the night. I went near the door and looked through the peephole. There was no one outside. It might be the neighbors' son Brad. He owns a stupid YouTube channel where he posts prank videos. I went back to the kitchen to get the water.

The doorbell rang again.

I ran towards the door and bashed it open to catch him red-handed but there was no sign of him or anyone else. I looked around thoroughly; no sign of anything. As I turned back, I noticed a small piece of paper on my doorstep. I picked it up. Something was written on it.

"RUN AS FAST AS YOU CAN AND NEVER LOOK BACK"

Chills ran through my back. The neighbor's son would never go to this extent. It must be someone else. I went back inside and locked the door. My phone rang. It was an unknown number. I picked it up. "Hello! Who's this?"

I could hear someone breathing heavily on the other side. "It's going to be hard to believe what I'm about to say now but you have to!" The voice sounded very familiar. It was my voice.

"How are you speaking in my voice? Is this some kind of a joke?" I asked.

"No! Listen to me! I'm you but from a different dimension. She's here to kill you. I tried to warn you twice but you neglected it. It's too late now," she replied in a trembling voice and hung up.

I tried calling that number again but the line didn't connect. As I was trying, I could hear the sound of someone breathing. I turned back slowly. I could see a silhouette of a young woman. It looked strikingly similar to mine. The lightning struck revealing her face. She looked exactly like me. She began to charge towards me and suddenly everything went black.

I woke up startled by the sound of thunder. Continuous streaks of lightning illuminated the otherwise dark room. My phone rang. It was the same number. I picked it up slowly. "Hello!"

"It's not too late now. Run!"

HELPING VS PRETENDING

by Ruhee Almas, 3rd Year



When someone asks me what makes me happy, I simply say that I find happiness in helping and improving the lives of my people. And that's my ultimate goal too. Why does it make you feel good about yourself when you fulfil the desires of people around you? I think it is a real success and also it's a kind of self-care.

I experience immense satisfaction whenever I fulfil the dreams and wishes of my people. This habit developed when I was 9 years old, but later while getting accustomed to this mindset, I realized that I was becoming a people pleaser. I didn't want to disappoint or hurt people so I would hardly say no to someone whenever they asked for help. Then, I got to know that it's not okay to put others before yourself.

Helping is good, but helping when you actually don't want to do it would leave you frustrated and stressed. I failed to set my boundaries. It made me hide my own needs to accommodate others' desires. Sometimes I hide my feelings too. People ended up taking advantage of me.

“It's ok to be a giving, caring person,” Myers says. “It's also important, however, to honour and tend to our own needs.”

Finally, I understood that helping people and helping them just for the sake of being nice are two different things. The latter leaves you doubting your abilities and feeling bad about yourself. Pretending takes away the joy of living.



ALUMNI INTERVIEW



MR. MOHAMED AKEEL SULTHAN

*(Senior Software Engineer for Automotive Embedded Systems, at bosch
Batch: 2010-2014)*

"Tell me about yourself. "

My name is Mohamed Akeel Sulthan, and I am from Ramanathapuram. I did my schooling in Edappadi. I am currently working as a Senior Software Engineer for automotive embedded systems at Robert Bosch Engineering and business solutions.

"How did you hear about this college?"

I heard about Crescent through my dad, Mr. S.S. SULTHAN. It is he who insisted on continuing my higher studies in Chennai.

"Best memories at Crescent."

My best memories are pertaining to the projects I have done from day one, especially the BAJA, and go-kart events which gave me a breakthrough in my career and implicitly helped in earning my current place at Bosch. During the project for the final event, our team traveled to Madhya Pradesh (BAJA) and Jalandhar (Gokart) to attend the grand final events at a national level. Also, we traveled to Bangalore (for Virtual BAJA presentations) and Pune (virtual Gokart presentations). I can never forget the fun our team had when we traveled by train. It was awesome. I enjoyed all my lab courses thoroughly to the core. It feels like yesterday that I joined my first year but time has passed so quickly.

"Your journey through Crescent."

The first year, I joined as a proud engineering student and I was so excited about what I was going to learn to become an engineer. Then, I began with smaller electronics projects from my 1st semester as I got a very good hold of basic engineering from the theoretical and lab courses which further boosted my enthusiasm to create more.

At the start of my second year, seeing my involvement in electronics, my first-year friends from the mechanical department approached me for some project support and explained to me about SAE BAJA which was a very prestigious national level competition. I got so fascinated with the idea of a team of 25 students building a real car (an All-terrain vehicle). And here I was responsible for electrical and electronics systems and innovative gadgets in the car. The next 3 years went swiftly with successive BAJA and Gokart events every year. And my final year project on compressed sensing in Wireless Sensor Networks with embedded systems.

"What are some of your academic achievements, and how did our department help in that?"

As I was involved completely in the BAJA event, I was not able to attend most of my theory classes. And yes, sometimes I missed exams too. But still, I was able to clear all my final semester exams with 80+ %, as I was learning all the course-oriented contents in the lab along with my project activities. I was thankful to the department for supporting me with 24X7 lab access in the times I needed. The department was very supportive in my BAJA project by allowing my interactions with mechanical and automotive departments and giving me attendance when I was involved in my project activities at the welding lab and circuits lab.

"How did you get into BOSCH?"

After my college when I was working in IT (networking and telecommunications, VOIP domain), I got an opportunity to work on an automotive-related project in a start-up company. I was able to keep my hardware knowledge and skills intact and got further real-time experience by facing a lot of technical difficulties (electrical, electronics, and mechanical). All these together and by the grace of the Almighty Allah, I was able to land my career in BOSCH automotive research.

"What helped you to gain interest in the hardware profession?"

It is my childhood hold to create things that kept prompting me to search for my career as a professional in hardware. It never allowed me to peacefully concentrate on my IT job.

"Advice for future engineers in their studies and choosing their career."

Don't study engineering, learn engineering with passion and curiosity through experiments (both course-oriented and own). And find the career which has the gravity for your heart, chase and grab it at any cost! And be the best of yourself.



MR. VIGNESH

(Senior research Scientist at Philips, batch 2008-2012)

"Good morning sir, What's your name and your current role in your company?"

I'm Vignesh and I'm working as a senior research scientist at Phillips located in the Netherlands.

"How was your journey at Crescent?"

I joined Crescent in 2008. Sadique Basha sir was my first-year class advisor and Iniyavan sir was my class advisor since my second year. I learned many things from the second year. There was a professor named Prakash Nagayan who finished his master's in the USA. He guided me a lot throughout my journey in the Crescent. We had a lot of interaction and he was my inspiration when I studied here. Also, he guided me in doing my projects and research paper during my final year.

"Why did you choose ECE?"

I was passionate about ECE. Also, I was curious about electronics from my school days, that's why I took ECE. In those days, CSE and IT had more demand than ECE. But I had thought that software can be learned more easily than hardware. Also, I want to work with hardware and that's the reason I chose ECE.

"Where did you do your master's?"

I did MS in embedded systems in the Netherlands and then did Ph.D. in Computer science. We also need to go through programming language to design hardware so I did my Ph.D. in computer science.

"What are your best memories in crescent?"

I was an introvert but after joining Crescent I had a growth in my social aspects due to interaction with many faculties. Even though Crescent has diverse people, still they work in unity.

"How was your life before and after Crescent?"

Before Crescent, I was an introvert but after Crescent, I cannot say extrovert but I was little more than that- I was able to grab opportunities. Crescent changed my mindset and I realized that I need to do something to go to the next stage I got inspired by the seniors and professors to go to the next level.

"How did you end up in Phillips?"

In Europe, there are no technology-based companies. While doing a bachelor's you can go to all the companies and explore and learn many things about fundamentals and during master's you will be specialized in it. While doing your PhD, you would be more specialized and the number of companies who can give you a job will narrow down and so the number of the companies I could do was 5 to 6 and one of them was Phillips. So I applied and got a job at Phillips.

"What will be your advice for future engineers?"

Engineers should think at a high level. If you take an example of an antenna, you should be able to explain it technically and you should be able to explain in such a way that a 5-year-old kid can understand. You have to understand the concept clearly. It's easy to explain it to a technical person but you should have the capability to explain it to non-technical people too.

For instance, take 5g, I can explain to my mom that it would be faster when you watch videos, and if a professor asks me I would say in 5G, at sub gigahertz FDMA technology is used with modulation. So you should be able to do both roles and you should do it for your future.



MS. MUTHU PARVATHI

(business analyst at CTS, Batch: 2011-2015)

"Good afternoon mam, What's your name?"

My name is Muthu Parvathi and I studied in the crescent from 2011-to 2015. I completed my bachelor's in crescent and then I started my career in cognizant and now I m working as a business analyst.

I got to know this college from my friends and seniors friends. And I liked the faculty and college as well. I learned about electronics and core. And I got in selected TCS and CTS, but I chose CTS.

"Why did you choose ECE?"

There was no particular reason that I chose ECE. I got to know that we can go for both hardware and software jobs, so I selected ECE. I liked all the faculty who taught me in the crescent. My best memory was my final year project and I was working under Ambika mam. We were designing antenna and we had learned many and had a good interaction with faculties.

"How do you reach CTS?"

As I attended many coding classes and campus interviews in our college and most of the companies were recruiting people and I got selected in TCS and CTS.

"How is your life before crescent and after crescent?"

Before crescent, I was a student without the knowledge of the future. But after getting into crescent I have a lot of exposure and I got an opportunity to work in cts. Also, I started noting many things that I didn't do in past.

"What's your advice for students?"

Focus on practical applications more than theoretical applications. Even if you study a single topic focus and go through it. Choose the topic that you are interested in rather than learning all topics.

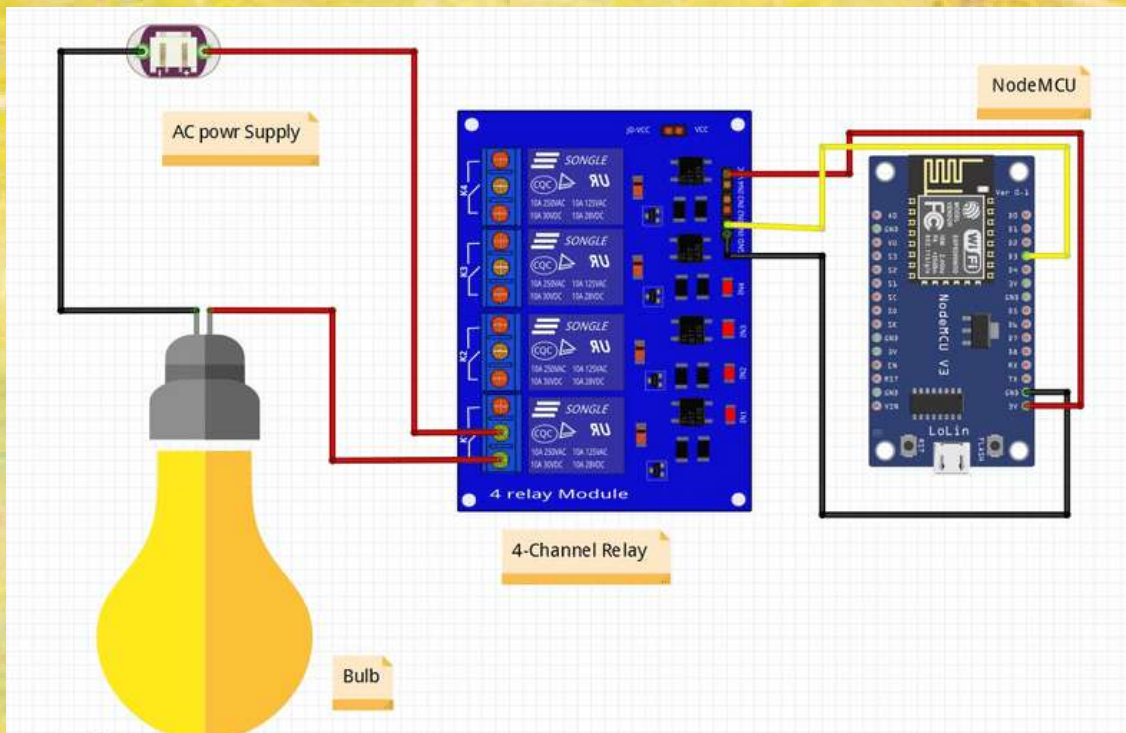
Conclusion:

My journey was nice. It was like missing my family when I passed out. It was very hard when I passed out. When I studied I was concentrating on theoretical parts more than application parts. So I m advising you, people, to work on practical aspects of the subject. But during my masters I came to know that students are working on the practical part it was 90% more practical than theoretical so if you guys are willing to do masters in other countries then concentrate on practical experience than theory. And I chose to do a master's to improve my knowledge further.





PROJECTS



DOMOTICS

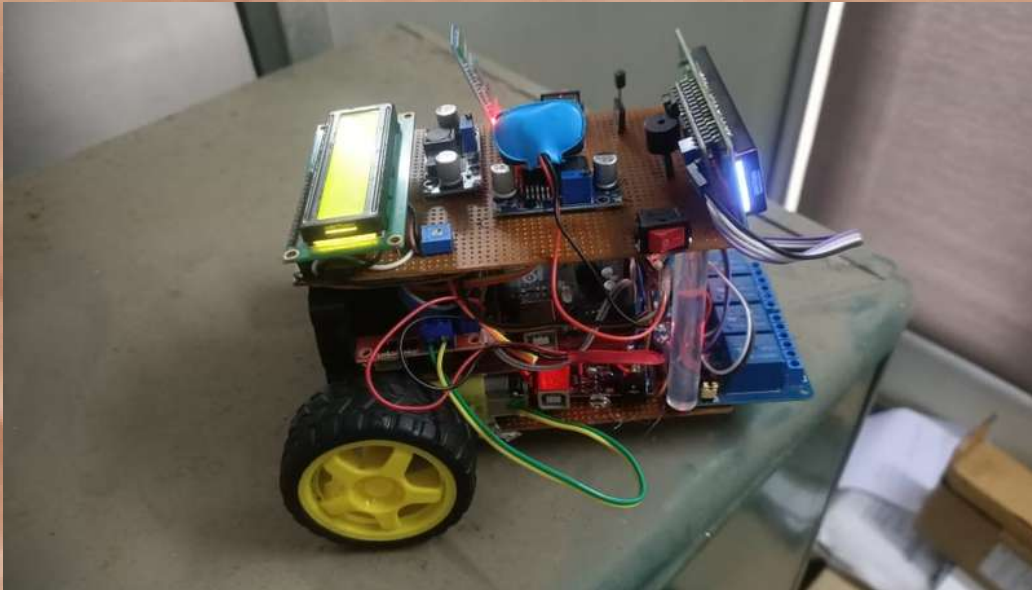
by S.R Parvez Riswan Mohamed, B. Sri Kumaran, A. Udayajit
(2019 to 2023 Batch)

With the growth of technology, our lifestyles ought to grow as well. The purpose of any technology is to make life easier, which is one of the purposes of this Home Automation project. Keeping aside the casual benefits that it brings to regular people, it can be of incredible use for the disadvantaged. Think of the elderly, or the sick that are confined to their beds, having to depend on other people for even the most basic adjustments to their surroundings. This Home Automation project integrates voice commands with appliances, reducing dependence on physical movements to control them.

A few basic components were used to assemble this project. The NodeMCU is connected to a smartphone using its inbuilt WiFi module. The Blynk app on this phone is used to switch ON/OFF the appliances. The online tool, IFTTT is used to create triggers that control the Google Assistant of the smartphone. This means that the appliances can be controlled by both the Blynk app and the Google assistant. The appliances are connected to the Node MCU using the Relay Board.

The Relay board is used to control the voltage supply given to the appliances. The size of the relay depends on the needs of the user.

Home Automation is extremely useful for improved security and energy efficiency. Every single device that can be connected to the internet can be controlled using just a smartphone. In practical application, the carbon footprints of individual users can be greatly reduced. The only drawbacks to this are that it requires consistent internet service and it can be expensive to set up. Additionally, users that are less technologically inclined may find it difficult to get used to. However, the overall pros tend to supersede the cons. So it is definitely a good idea to look into.



TEMPERATURE AND FIRE CONTROLLER MODULE

by Saifuddeen (2021 to 2025 Batch)

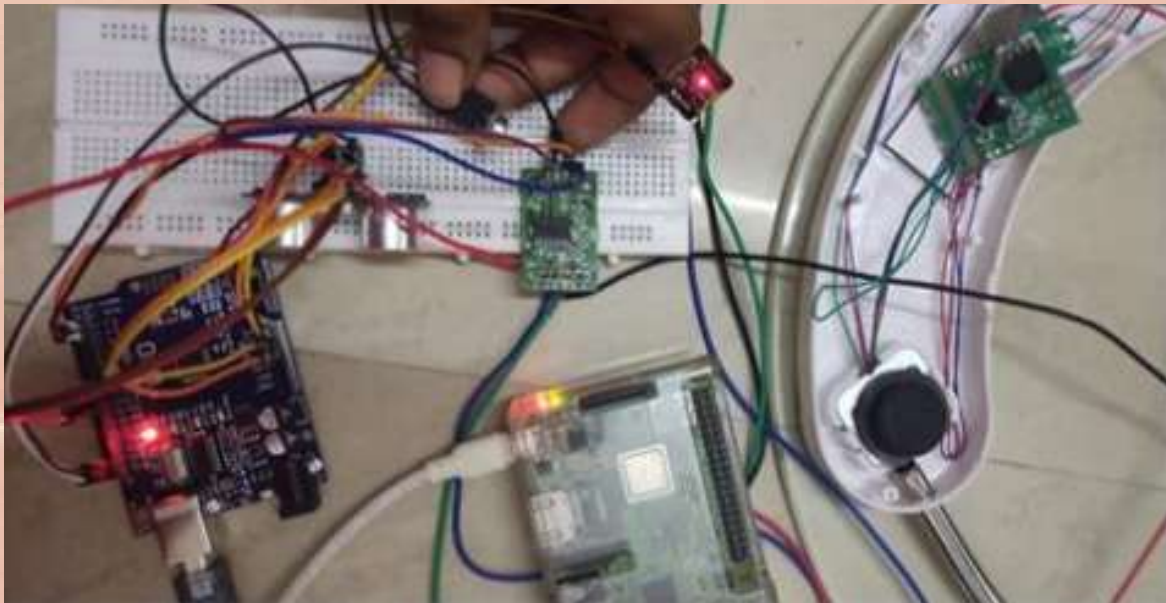
To ensure safety, comfort, performance and reliability, modern vehicles keep track of a variety of variables and quantities using sensors and integrated systems. Among those quantities, the temperature and the gas sensors are the most frequently measured variables. Any change in the external or internal temperature triggers the relevant system to act accordingly.

Components used-

- Arduino
- Relay
- MQ4
- LM35
- Buck converter
- 12v DC fan
- Motor driver

The main objective of this project is to control the temperature of the engine and to prevent fire accidents. The temperature sensor is kept at the top of the engine to detect the heat and to cool it down. As the temperature increases to 90°C, the LM35 sensor prevents a possible accident. As the LM35 sensor senses the leakage of the gas, immediately the module cuts off the circuits.

The applications of this module are various- It is mostly used in the automobile industry and in old cars to prevent accidents. It is also used in the gas lines.



PRELIMINARY MOBILE DIAGNOSTIC CENTER

by Fahmidha Shereen .F, B. Venu Gopal Reddy and Jai Sakthi Vijay .M
(2017 to 2021 Batch)

In this pandemic situation maintaining health and health-related information is given utmost care. Generally, in hospitals, this information is collected through various medical equipment/devices. The major limitation is that the person has to visit a medical centre or must have a health monitoring product that is not affordable for everyone. Currently, there is a need for periodic health observation because of COVID-19 but the basic health data acquiring product will not store data and data comparison is not done for the data collected.

IoT is widely used nowadays to store data and for data interpretation. Storing data in the cloud help in long term access. The proposed work aims to design and implement a Preliminary Diagnostic Center which will provide preliminary health information of a person at low cost, along with a précised report of the person's health status by comparing real-time data with standard data. This report acquired will be mailed to the person.

Healthcare data provided in the diagnostic booth includes height, weight, BMI, body temperature, blood oxygen level and heart rate. The person's personal data is collected and the medical data from the various modules are processed. This processed data is emailed to the user. The data acquisition modules contain various sensors to acquire various parameters and these are processed using the Arduino module and sent to the raspberry module. The general data interpretation is done using an HTML form. This convenient and low-cost design can be used by all users and the data collected are stored for later access.

COFFEE WITH FACULTY



DR. G. KANNAN

ASSOCIATE PROFESSOR, ECE

"Hello sir! Can you tell us about yourself?"

I'm G Kannan. I joined this prestigious institution in December 2010. First of all, I would like to congratulate the editorial team on the upcoming publication "Cres ECE Minds" magazine's third issue. It is a gift for the ECE department. Thank you for sharing it with us.

"How has been your experience in Crescent?"

My experience in Crescent has always been a good and memorable one. Crescent provided a good platform for the teaching-learning process, research, and healthy relationships with students. Crescent always encourages lifelong learning other than the subjects. Curriculum changes, but technological advancement is always ongoing with a true passion for updating their skills that will create high-quality professionals.

"What are the opportunities in the core industries for the ECE students?"

Our ECE department has a good rapport with leading core industries like Nokia Network Solutions, Jasmin Infotech, Capgemini, WEGoT Utility Solutions, Denvik Technology, Fldec, etc. Apart from the placement cell, our department's team has taken enormous efforts for every student to get linked with any one of the core industries for industry projects, paid internships, CSR projects from their sixth semester. Also, the ECE department has eminent affiliate faculty from International institutions and industry experts to handle one-credit courses and seminars. This will help the students to get deep knowledge about different domains and opportunities in core industries.

“What are your suggestions for choosing a domain in the industry?”

Our B.Tech ECE curriculum offers four elective streams- RF Communication & Signal Processing, VLSI & Embedded Systems, Artificial Intelligence & Machine Learning, and Automotive Electronics & Robotics. Students can choose based on their interests and become specialized in a particular domain. After entering into the core industry, it is always advisable to work a minimum of 2-3 years in the same industry to understand the complete life cycle of the project.

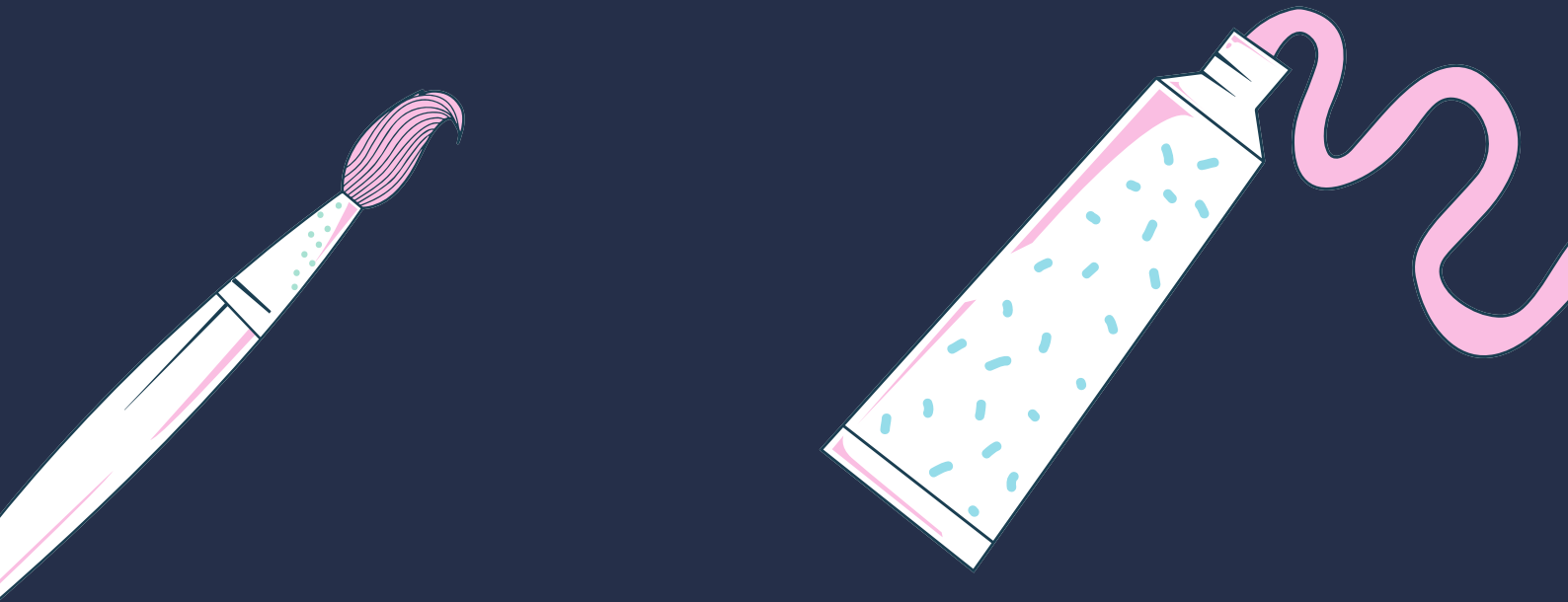
Many of our alumni started their career with start-ups with a lower pay scale; but after three years, they are working in top MNCs like Samsung, Philips, Ericsson, Robert Bosch, Wabco, JBL, etc getting incomparable salary packages in software industries.

“Can you share something about the best projects you have done with students?”

Our students are always doing their best in all projects. I remember Mr.Mohamed Hishaam M (2014-2018 batch) had done a project titled “Employee Tracking System” for the Nokia industry.

Mr.Ramkrishna Patra the head of Nokia Network solutions appreciated the project and agreed to implement it in the industry.





ARTISAN VALLEY





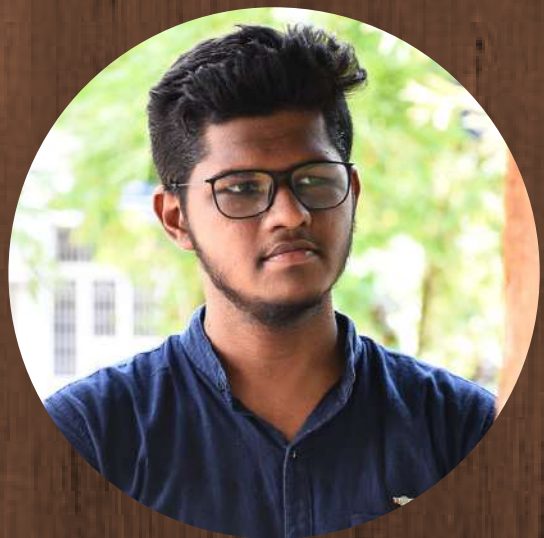
**UMA MAHESHWARI P
III YEAR B**



SHREE HARINI KP
III YEAR B



KAVYA
III YEAR B



AZIM KHAN
III YEAR A



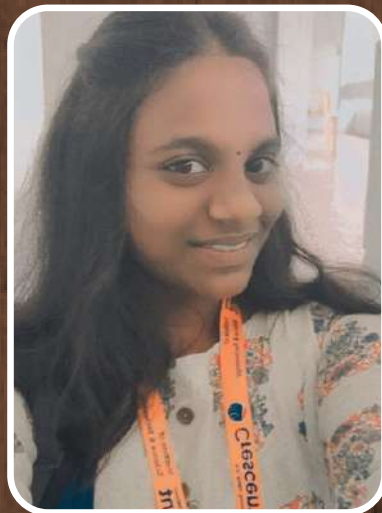
A.S.ARSHIYA MEHAAJABBIN
II YEAR A



Mrs. ANITHA
ASSISTANT PROFESSOR Sr.Gr



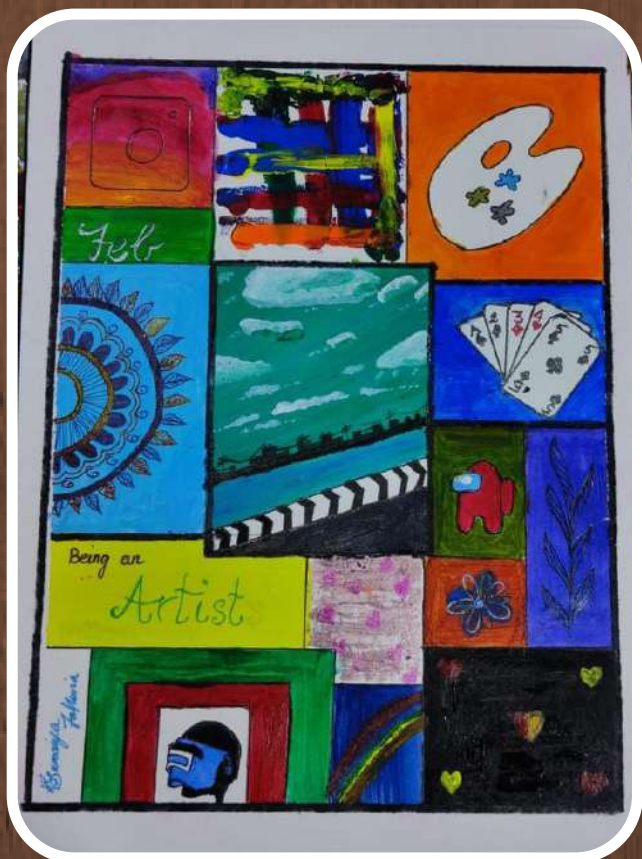
ABINESH .M
I YEAR A



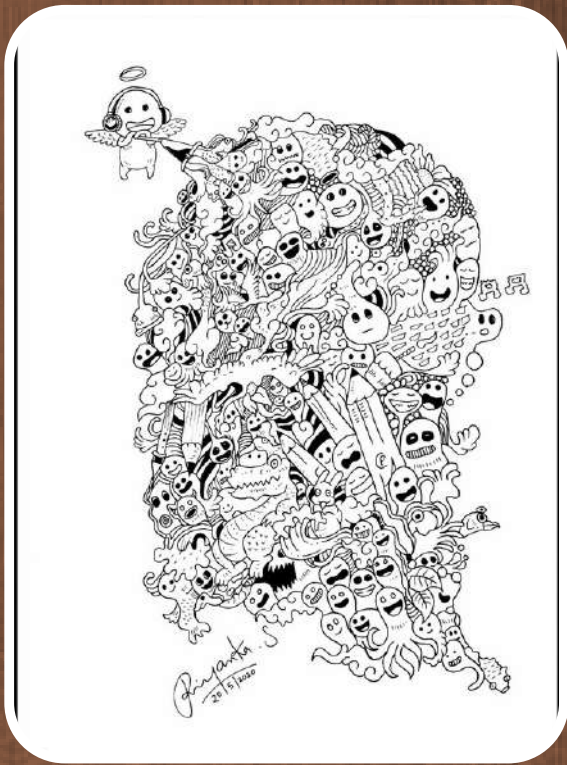
LAVANYA V
I YEAR A



THAMEENA PARVEEN
II YEAR A



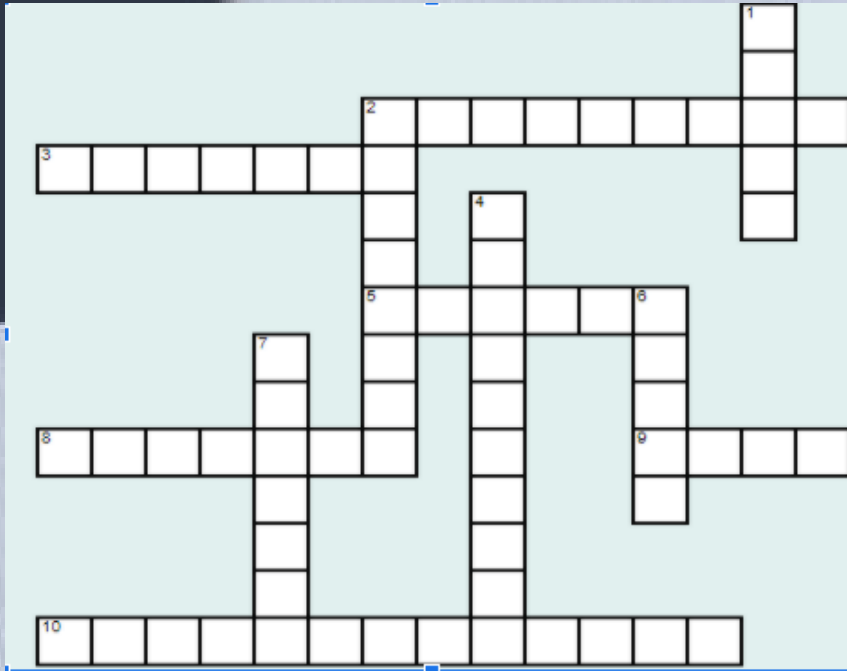
SUMAIYA FATHIMA
IV YEAR B



**PRIYANKA
IV YEAR B**



CROSSWORD



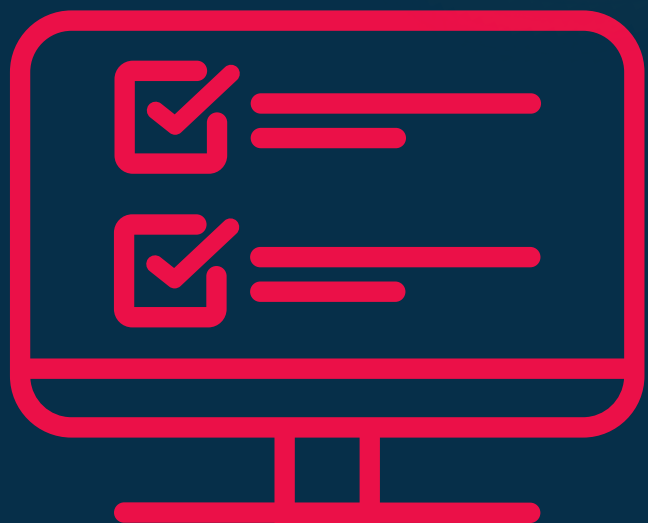
Across

- 2 Keeps Electrons Tightly In Place
- 3 Subatomic Particle Without An Electrical Charge
- 5 Very Often Used As A conductor
- 8 Instrument For Measuring Current Flow
- 9 Surrounded by One or more electrons
- 10 Circuits which inherits deays.

Down

- 1 Device That Allows Current Flow In One Direction
- 2 Also called a coil or choke
- 4 Stores electrical energy
- 6 Electrically Operated Switch
- 7 Converts Chemical Energy into Electrical Energy

TECH OUTZ!



TECH QUIZ

ONE WORD ANSWER:

1. A structure that stores in number of bits in taken “together as a unit is called?
2. Sound communication started for 1st time by starting....
3. Three or more devices share a link in _____ connection
4. Cookies were originally designed for _____
5. The element that has the biggest size in a transistor is _____



ANSWERS :

1. Register

2. Radio

3. Multipoint

4. Server side programming

5. Collector

Choose the Following!

Note: correct answer is marked in **RED**

1. Transistor is a _____

a. A passive component

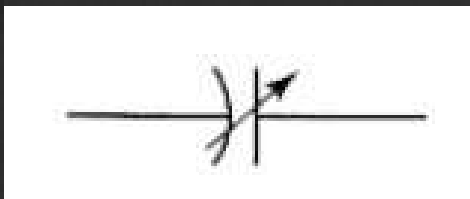
b. Active component

c. None of these

d. Both a & b

2. Identify which one is rheostat_____

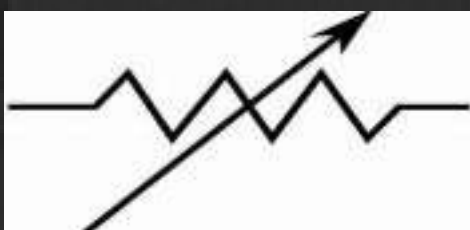
a.



b.



c.



d.



3. Which type of transformer is required to create a 180 degree input to a rectifier?

- a. stepped-up secondary
- b. step-down secondary
- c. split winding primary
- d. center-tapped secondary

4. In 8-bit microprocessor, how many opcodes are present?

- a. 256
- b. 246
- c. 278
- d. 250

5. Which of the following sequence that a microprocessor follows?

- a. Fetch, decode, execute ,
- b. Decode, fetch, execute ,
- c. Fetch, execute, decode
- d. Execute, decode, fetch

Match the following :

1	The 1st microprocessor is built by Intel Corporation is starting by.....	Hub
2	Small device that connects computers together	Music Synthesis
3	Units of capacitor	Insulator
4	Application of DSP is ...	4004
5	A material that as extremely high electrical resistance is known as....	Farad

ANSWERS!

- 1 – 4004,
- 2 – HUB ,
- 3 – FARAD,
- 4 – MUSIC

CROSSWORD ANSWERS & WINNERS

Across	Down
2 Keeps Electrons Tightly in Place	1 Device That Allows Current Flow in One Direction
3 Subatomic Particle Without An Electrical Charge	2 Also called a coil or choke
5 Very Often Used As A conductor	4 Stores electrical energy
8 Instrument For Measuring Current Flow	6 Electrically Operated Switch
9 Surrounded by One or more electrons	7 Converts Chemical Energy into Electrical Energy
10 Circuits which inherits delays.	

TOP THREE WINNERS:

1 ST PLACE

KRUBA SANKAR.S - ECE A - IIIIRD YEAR

2ND PLACE

THASLIMA PARVEEN.R- ECE B -IIIIRD YEAR

3RD PLACE

THUMMAGUNTA VEDHASHREE - ECE B - IIIIRD YEAR

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UNITY IS OUR STRENGTH



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PROFESSOR & HEAD/ECE



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PROFESSOR



DR. M. MOHAMED ISMAIL
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PROFESSOR

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