

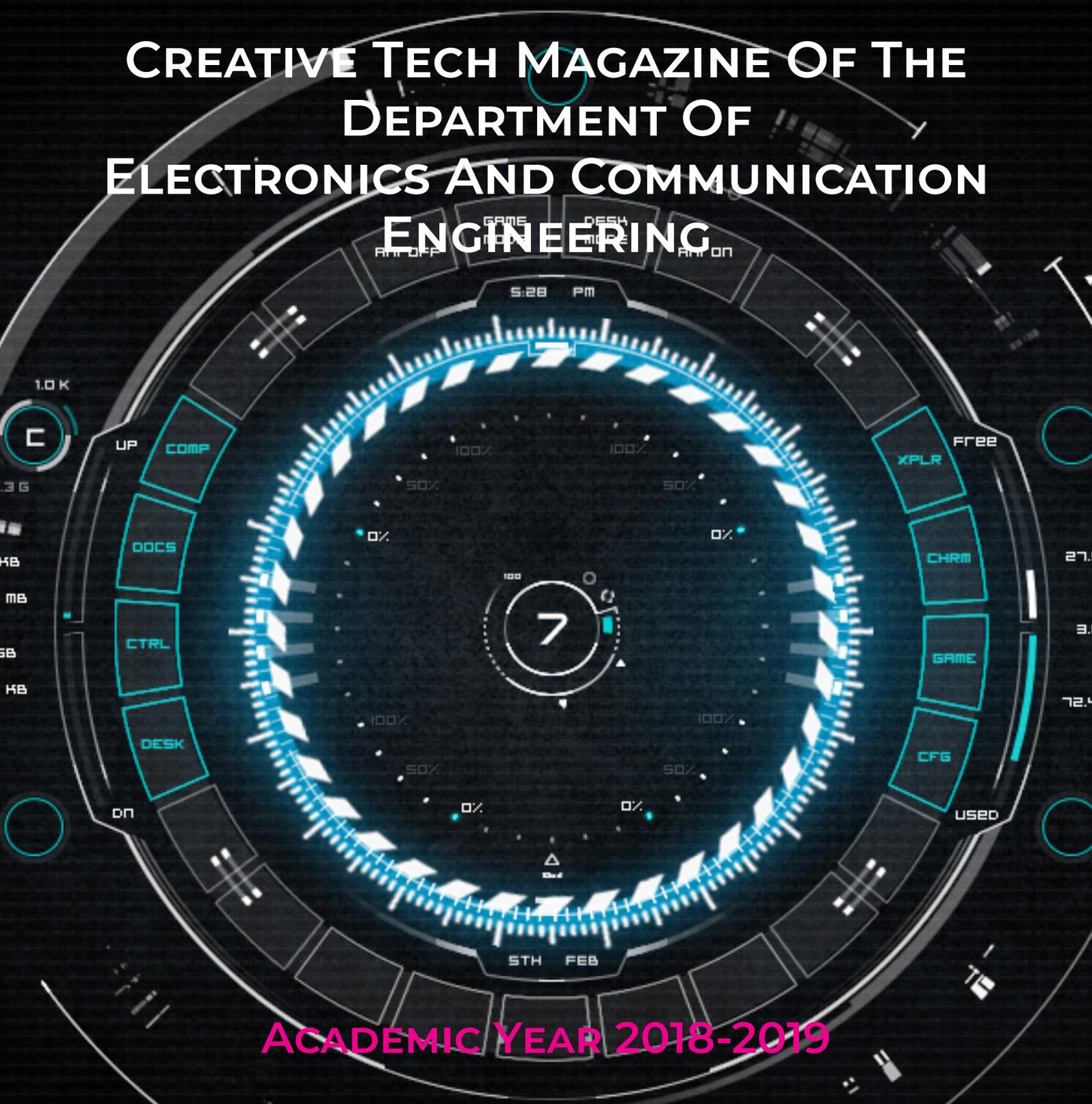


VELAMMAL
INSTITUTE OF TECHNOLOGY

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"Velammal Knowledge Park", Chennai - Kolkatta Highway, Ponneri - 601204

EVOLVE

CREATIVE TECH MAGAZINE OF THE
DEPARTMENT OF
ELECTRONICS AND COMMUNICATION
ENGINEERING



ACADEMIC YEAR 2018-2019

Velammal Institute of Technology

Vision of the Institute

To be a leader imparting in quality technical education, re-search and enterprising skills in pursuit of professional excellence

Mission of the Institute

- To promote quality education & technical skills to meet the industry requirements.
- To incorporate team work, leadership skills & lifelong learning.
- To facilitate career development & higher education assistance.
- To encourage innovative ideas for research & development and entrepreneurship for societal needs.
- To inculcate ethical responsibility & human values

Department of Electronics and Communication Engineering

Vision of the Department

To achieve academic excellence in the field of Electronics and Communication Engineering and to produce meritorious engineers with human values by imparting high quality technical education

Mission of the Department

- To create efficient Electronics and Communication Engineers to meet the current and future demands of industry and society with ethical values.
- To instil the quality of leadership and entrepreneurship in students.
- To elevate the spirit of innovation and creativity among students towards research and development.

Velammal Institute of Technology

Program Educational Objectives (PEOs)

PEO-I: Futuristic Learning:

Graduates will attain excellence in the field of Electronics and Communication Engineering through lifelong learning process by imbibing the new technologies.

PEO-II: Career Development:

Graduates will become successful engineers or researchers or entrepreneurs with social responsibilities.

PEO-III: Professionalism:

Graduates will excel as estimable engineers with ethics, effective communication and leadership skills.

Our **Velammal**



- Veronica Prasad III Year ECE B (2016-20)

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Editor's Desk

The Creative minds of the Electronics and Communication department of Velammal Institute of Technology have come together to present what they have always wanted to and we congratulate every student who has given their contribution.

They can't be appreciated enough and we can't explain how difficult it was to compile all their accomplishments into a single magazine. We take pride in showing you of how our very own Velammalians have imaginations which spread across the horizons.

We would like to thank the Management and all the staffs who have supported the 'Evolve' initiative and for having trust in the Editorial board by giving us full freedom to choose the contents and design for our magazine. The magazine should serve as a pillar of motivation for every other student who is yet to emerge as an Achiever and to carry the legacy of Evolve. The students who follow in the next academic years, we advise you to do the same. Go Mad, B.E. productive but at the same time B.E. creative! (pun intended)

Abhi

Editor In-Chief, Evolve



K. Ragupathi
Assistant Professor
Director, Evolve



P. Abhishek III year ECE A (2016-20)
Editor in Chief • Project Developer



TK Vishal II year ECE B (2017-21)
Designer • Developer • Freelancer
<https://tkvishal.now.sh>

Words from the **Principal**

EVOLVE | MAGAZINE

On this bright day, I feel proud to see the progress that this Evolve magazine has made over the years. It pleases me to see the involvement which the students have in both the technical and non-technical zones. I would like to see a lot more exciting content and an increase in the students' contribution over the upcoming years.



From the HOD's table

I, The HOD of ECE take great honour in congratulating the students who have contributed for the current year's Evolve magazine. This is the third edition and I really hope that this would be as useful as the last two Evolve editions. Acknowledging the fact that the magazine is completely created and designed by the students I really hope this would kindle a spark in the minds of the students who are yet to contribute towards the progress of the Evolve Initiative in the upcoming years.



All the best students!

EVENT OF THE YEAR

IGNICULUS 2018



What if I tell you the Improbable was made possible? The National Level Technical Symposium "IGNICULUS 2018" had Three technical events and six non-technical events. Treasure hunt and The Skywarz-Drone show made the entire symposium stand-out. The Igniculus 2018 set a benchmark by having more than **450 registrations** from all across the Nation. The Participants were properly managed, and No talent was left Unnoticed. The Event was held on 21st July 2018.

All Hail Igniculus!!!

Dr. A.M. Narendra Kumar
Senior Manager
Sify Technologies Limited

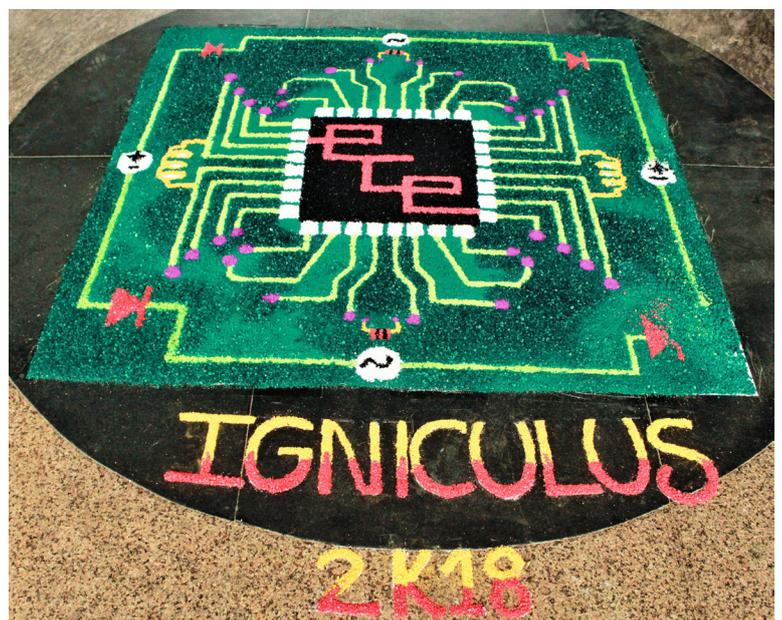
Dr. T. Chandrashekar
Principal



Mr. Vethapuri Prithvi Agathiyam
CEO, HELIOS

Dr. B. Sri devi
HOD & Prof (ECE)

The picture has our Chief guest panel consisting of Dr. A.M. Narendra Kumar Senior Manager Sify Technologies Limited and Mr. Vethapuri Prithvi Agathiyam CEO, HELIOS. who kickstarted the event by sharing their own personal industrial experience which kindled motivation in the students' heart. The Igniculus 2k19 was designed by the students and also for the students and hence every want and need of the participants was fulfilled.



Engineering Made Simple!

Understand the basics of the components

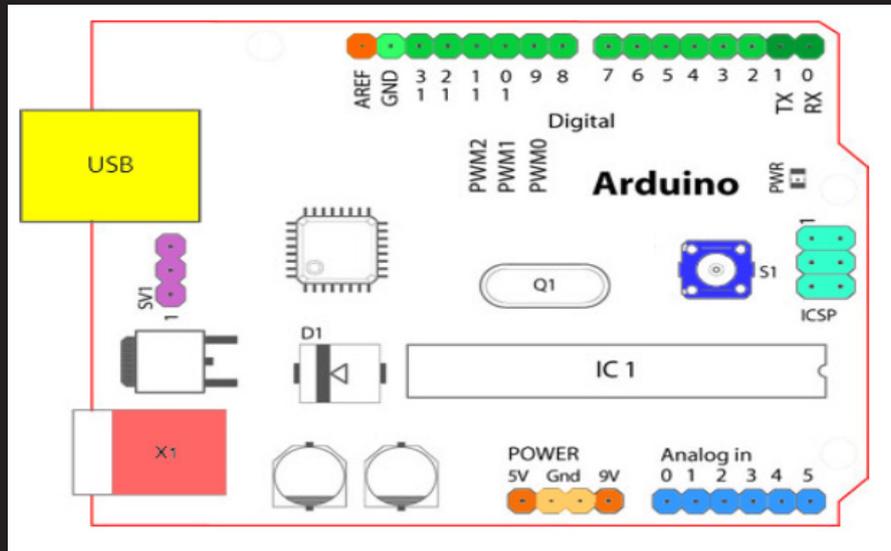
- R.S. Varsha ECE B II year (2017-21)

ARDUINO UNO

Arduino is an open-source hardware and software company, project and user community that designs and manufactures single-board microcontrollers and microcontroller kits for building digital devices and interactive objects that can sense and control objects in the physical and digital world.



ARDUINO UNO R3



Starting clockwise from the top center:

- Analog Reference pin (orange)
- Digital Ground (light green)
- Digital Pins 2-13 (green)
- Digital Pins 0-1/Serial In/Out -TX/RX (dark green) - These pins cannot be used for digital i/o (digitalRead and digitalWrite) if you are also using serial communication (e.g. Serial.begin).
- Reset Button - S1 (dark blue)
- In-circuit Serial Programmer (blue-green)
- Analog In Pins 0-5 (light blue)
- Power and Ground Pins (power: orange, grounds: light orange)
- External Power Supply In (9-12VDC) - X1 (pink)
- Toggles External Power and USB Power (place jumper on two pins closest to desired supply) - SV1 (purple)
- USB (used for uploading sketches to the board and for serial communication between the board and the computer; can be used to power the board) (yellow)

ADVANTAGES:

- Inexpensive
- Cross-platform
- Simple, clear programming environment
- Open source and extensible software



Raspberry Pi

A small and affordable computer that you can use

The Raspberry Pi is a series of small single-board computers developed in the United Kingdom by the Raspberry Pi Foundation to promote teaching of basic computer science in schools and in developing countries.



Two 5V pins and two 3V3 pins are present on the board, as well as a number of ground pins (0V), which are unconfigurable. The remaining pins are all general purpose 3V3 pins, meaning outputs are set to 3V3 and inputs are 3V3-tolerant.

Outputs:

A GPIO pin designated as an output pin can be set to high (3V3) or low (0V).

Inputs:

A GPIO pin designated as an input pin can be read as high (3V3) or low (0V). This is made easier with the use of internal pull-up or pull-down resistors. Pins GPIO2 and GPIO3 have fixed pull-up resistors, but for other pins this can be configured in software.

More:

As well as simple input and output devices, the GPIO pins can be used with a variety of alternative functions, some are available on all pins, others on specific pins.

PWM (pulse-width modulation)

- Software PWM available on all pins
- Hardware PWM available on GPIO12, GPIO13, GPIO18, GPIO19

SPI

- SPI0: MOSI (GPIO10); MISO (GPIO9); SCLK (GPIO11); CE0 (GPIO8), CE1 (GPIO7)
- SPI1: MOSI (GPIO20); MISO (GPIO19); SCLK (GPIO21); CE0 (GPIO18); CE1 (GPIO17); CE2 (GPIO16)

I2C

- Data: (GPIO2); Clock (GPIO3)
- EEPROM Data: (GPIO0); EEPROM Clock (GPIO1)

Serial

- TX (GPIO14); RX (GPIO15)

Movies an Engineer should watch

The movies listed below have no explicit content or usage of strong language

- P.Abhishek ECE III year (2016-20)

1. INTERSTELLAR

2 out of the 10 films listed here have been directed by Christopher Nolan. It takes more than a director to make a movie like this. With our time on Earth coming to an end, a team of explorers undertakes the most important mission in human history; traveling beyond this galaxy to discover whether mankind has a future among the stars. There is no better sci-fi movie than this nor will ever be.

2. INCEPTION

A masterpiece, The Movie took 4 years of shooting and was worth every bit of it.

Inception is a feast for the mind and the senses, the kind of movie experience we dream of. No matter how you look at it - as a new take on the heist film, as a narrative mind game, or as a metaphor for filmmaking itself - Inception will thrill you into thinking about weird new ideas.



Christopher Nolan



3. THE MATRIX

What if virtual reality wasn't just for fun, but was being used to imprison you? That's the dilemma that faces mild-mannered computer jockey Thomas Anderson in *The Matrix*. Where other films are done in by the freedom offered by computer effects, *The Matrix* integrates them beautifully.

4. MINORITY REPORT

Tom Cruise stars as John Anderson, a Washington, D.C. detective in the year 2054. Anderson works for "PreCrime" a special unit of the police department that arrests murderers before they have committed the actual crime. PreCrime bases its work on the visions of three psychics or "precogs" whose prophecies of future events are never in error. For its stunning visuals and standout performances, *Minority Report* or at least the first three-fourths of it might just be the best movie so far.

5. I ROBOT

In the future presented in the film, humans have become exceedingly dependent on robots in their everyday lives. Robots have become more and more advanced, but each one is preprogrammed to always obey humans and to, under no circumstances, ever harm a human. So, when a scientist turns up dead and a humanoid robot is the main suspect. The movie does an excellent job in portraying how Artificial Intelligence is going to make a huge impact over the society.

6. SOURCE CODE

This is a film that feels 'smart' without desperately trying to be so. The characters are few and the settings limited, such that complex ideas can peacefully exist inside the film, without tying the narrative in knots. It won't seem like a sci-fi, as the movie proceeds towards the climax...BOOM!! The best sci-fi ever watched.

7. PREDESTINATION

Predestination chronicles the life of a Temporal Agent (Ethan Hawke) sent on an intricate series of time-travel journeys designed to prevent future killers from committing their crimes. I DARE YOU TO UNDERSTAND THE MOVIE ON THE FIRST WATCH.

7. ARRIVAL

When mysterious spacecraft touch down across the globe, an elite team--lead by expert linguist Louise Banks (Amy Adams) are brought together to investigate. As mankind teeters on the verge of global war, Banks and the team race against time for answers and to find them, she will take a chance that could threaten her life, and quite possibly humanity. More Heart melting than Science fiction.

தமிழ்

- ஸ்வேதா அ.ம, IYear ECE (2017-21)

தமிழே உன்னை உச்சரிக்கும்போது
காற்று கூட கர்வம் கொள்ளும்.

உன்னை எழுதும் போது
பேனா கூட பெருமை கொள்ளும்

அள்ள அள்ளக் குறையாத அமுது தமிழ்!
வியக்க வைக்கும் விந்தை தமிழ்!
புரியாத புனிதம் தமிழ்!
எத்தனை அழகு தமிழ்?!

அத்தனை அழகையும் அடக்கிட...
ஒரு கவிதை போதுமா?!

தித்திக்கும் அமுதுதமிழின் சுவை,
தலைக்கேறி, நிலைதடுமாறி,
வியக்கிறேன் உன் வார்த்தைகளால்...!

திகைத்துப் போய் திணறுகிறேன்
உன் எழுத்து வடிவத்தால்...!

கண்மூடித்தனமாய் கிறுகிறுத்துபோகிறேன்,
உன் கீர்த்தனைகளால்...!

என் தாய் என்னை கருவில் சுமந்தாள் - அவள்
அறிமுகப்படுத்திய தமிழ் அன்னையே...!
உன்னை நான் என்றென்றும்
என் இதயத்தில் சுமப்பேன்!



You can win

Winners don't use excuses, they find solutions

- I. Shakthinathan ECE B II year (2017-21)

Winning is and has become the central use of society and everything we do revolves around this one dynamic structure. The most heartening quote is "Winners never quit and quitters never win". Victory tastes very sweet and there are many advantages of winning. As harder as win, the sweeter the taste of victory. If you feel better about yourselves you improve your confidence. If your hungry to win grows it becomes greater then the fear of losing. The set up is to specific goals, you need to know where you are going. Don't afraid of failure, take responsibility of that because who take failure as their own they saw success. Winners are the one who are self aware about their mistakes and decisions brought them. Try to learn everything new everyday because when it comes to winning more knowledge is basically a power of a person. You will not say failing demotivates you,



you should get the best out of it. If you are too cautious about success might lose opportunity and you might not have a second chance. The main difference between losers and winners is that winners stay dedicated in their goal to becomes a winner. And in the ebd it comes to working hard. Don't forget that the more efforts you put, the better results you will have in any fields of life.

Let's Learn Morse Code

- J.A. Jackswin Lino Sam ECE B II year (2017-21)

A	● —
B	— ● ● ●
C	— ● — ●
D	— ● ●
E	●
F	● ● — ●
G	— — ●
H	● ● ● ●
I	● ●
J	● — — —
K	— ● —
L	● — ● ●
M	— —
N	— ●
O	— — —
P	● — — ●
Q	— — ● —
R	● — ●
S	● ● ●
T	—

U	● ● —
V	● ● ● —
W	● — —
X	— ● ● —
Y	— ● — —
Z	— — ● ●

1	● — — — —
2	● ● — — —
3	● ● ● — —
4	● ● ● ● —
5	● ● ● ● ●
6	— ● ● ● ●
7	— — ● ● ●
8	— — — ● ●
9	— — — — ●
0	— — — — —

Morse code is a character encoding scheme used in telecommunication that encodes text characters as standardized sequences of two different signal durations called dots and dashes or dits and dahs. Morse code is named for Samuel F. B. Morse, an inventor of the telegraph.

Recent Technologies

21st century has seen a huge boom in Technological development.

- M. Sri Balaji ECE II year (2016-20)

5G TECHNOLOGY:

4G - the mobile network that's used around the world to make calls, send messages and surf the web. Now there are plans for 4G to be replaced by 5G. 5G - a new, faster network that has the potential to transform the internet. 5G is a software defined network - it means that, while it won't replace cables entirely, it could replace the need for them by largely operating on the cloud instead. This means it will have a 100x better capacity than 4G which will dramatically improve internet speed. For example, to download a two-hour film on 3G would take about 26 hours, on 4G you'd be waiting 6 minutes and on 5G you'll be ready to watch your film in just over three and a half seconds. But it's not just internet capacity that will be upgraded. Response times will also be much faster.

HYPERLOOP:

Billed as the fastest way to cross the surface of the earth, hyperloop represents the greatest leap in transport infrastructure for generations. With



passengers sitting in pods that travel at airline speed through pressurized tubes using electric propulsion and magnetic levitation, the concept promises to slash journey times between major cities from several hours to a matter of minutes. While it may feel like science fiction, hyperloop is now on the cusp of becoming a reality. Hyperloop was first conceived in 2012 by Tesla and SpaceX founder, Elon Musk.



OLED:

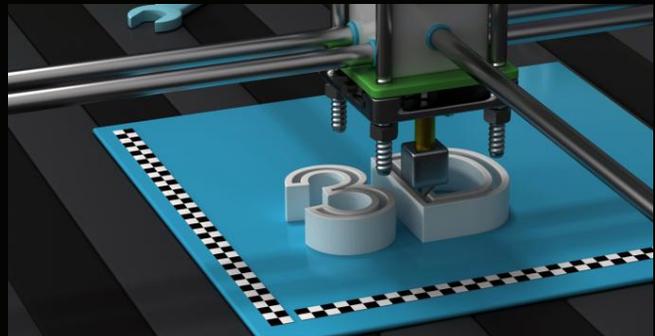
Organic Light Emitting Diode is an advanced display technology made from thin films of light emitting organic materials. OLEDs are made by placing a series of organic thin films between two conductors. When electrical current is applied, a bright light is emitted. Currently OLED Displays are made by evaporating gases in a vacuum chamber, but in the future OLED can be made by Ink-Jet printing, a process that is quick and cost effective.

OLED Display are simpler than LCDs, as they do not require any backlighting and filtering. OLEDs have many advances over LCDs. It has better contrast, higher brightness, faster refresh rates, lower power consumption and it has simpler design that enables ultra-thin, flexible, foldable and transparent displays. OLEDs are considered by consumers and professional alike to be the best displays ever.

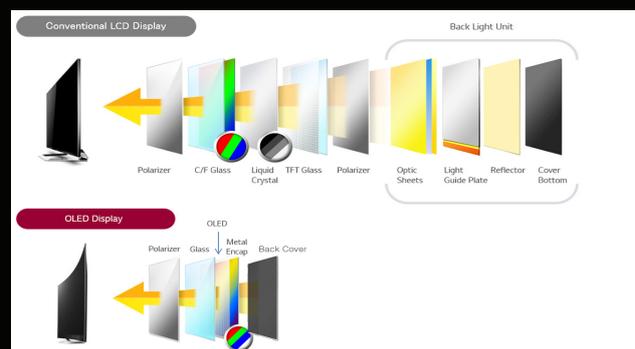
3D PRINTING:

3D printing technology is already changing the way we produce objects from tools and toys to clothing and even body parts. 3D printing is part of a process known as additive manufacturing, where an object is created by adding material layer by layer. Additive manufacturing allows designers to create complex parts for machines, airplanes and cars at a fraction of the cost and time of standard means like forging, moulding and sculpting. Now, smaller consumer friendly 3D printers are bringing additive manufacturing to home and businesses.

The first step in 3D printing is create a blueprint of the object you want to print. You can use modelling software like Blender to create your own designs or you can refer some websites for designing. Once you have finished design it's time to send it to the printer. Some printer has removable bioplastic spools in the back of the device almost like a string. When the printer receives the data, it pulls the material through a tube, melts it, and deposits it to the plate, where it instantly cools. The 3D object is created through layering where the printer will add one layer of the object at a time until you have a fully formed structure.



The most common material used in 3D printing is plastic. But the use of some other materials allows for the creation of amazing products beyond simple tools and toys. 3D printing food is becoming very popular and additive manufacturing has allowed for the creation of some intricate treats. In the medical world, doctors are testing bio-materials for regenerative medicine. By using patient's cells, doctors could 3D print small body parts like ears and noses. Some surgeons have even tested 3D printed organs for transplants. Recently, giant 3D printers in China, printed ten houses in just one day at a cost of less than \$5000 per house.



Student Project

Exoplanet Explore

A interactive research Document and Data analysis report on Extra-solar planets.

URL : exoplanetexplore.now.sh

- T.K. Vishal ECE B II year (2017-21)

Why Exoplanets?

Earth is and has been our home since our existence. But not too far in the future! Don't you think we might migrate to a new home that is probably a new star system? They will help us answer one of the most fundamental questions in science and philosophy: are we alone? Current or next generation telescopes could very well identify terrestrial planets in the liquid water habitable zones of their planets that have atmospheric spectra indicating the presence of gases that would only exist in those combinations with the presence of life. Alternatively, we may find that life is much harder to find than we expect. This'll mean either that life is rare or that we don't understand its impacts on its surroundings well enough to detect it. Whatever happens, we'll learn something profound about our place in the universe.

The Project:

Exoplanet Explore is a Data driven Visual Analysis of Exoplanets, meaning that the project aims at analyzing Exoplanet visually using various visualization frameworks.

"I was a space geek since birth, I never stopped gazing at the sky and thinking about the stars and planets. It blows my mind if we think how miraculously small and alone we are in this infinitely expanding cosmos. I had the Kepler Telescope findings and NASA's official analytic data at my disposal. I barely had any knowledge about data visualisation and analysis using programming. But the raw interest that I had in space exploration drove me through the learning process of programmatic data visualisation. I had a somewhat past experience in full stack software development. with all these skills and my enthusiasm I solely finished this project in a month. It was a wonderful, memorable experience" says TK Vishal.

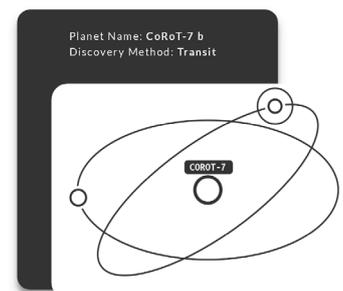


Exoplanet Explore

An Analysis report on Exoplanets
Made with  and  by TK Vishal

[🔗](#) [📄](#) [📱](#) [📺](#)

The Analysis



“You can learn about a topic even more deeply if you looked it in another perspective, bursting out of my comfort zone and thinking about space exploration with programming constraints in my mind lead to success of this project, therefore I loved every second sculpting this project from the scratch”, he adds.

The Statistics:

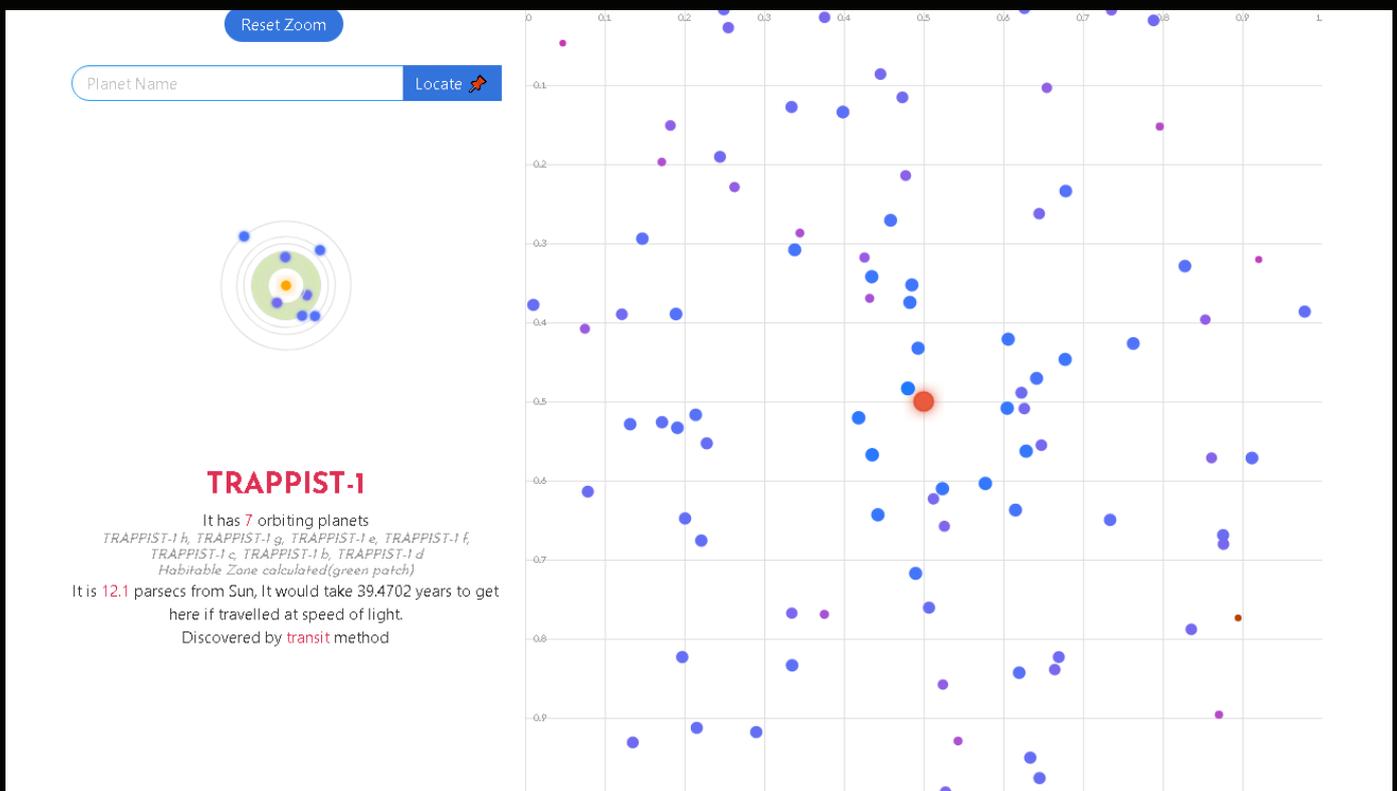
The project started on Nov 30 2018 (6:15 PM) and finished on Dec 14 2018 (3:48 PM). The project underwent two phases. The analysis phase where the exoplanet data is researched and planned. The development phase where the analysis part is converted to beautiful visuals.

How does it work?

I don't want to go in depth technically, So, I've just listed the “stuff” that's used to make this project.

Tech Stack:

- D3.js (A Javascript Data Visualisation Library)
- VanillaJS (Just plain old Javascript)
- HTML, CSS (the skeleton and the make-up)
- Python (Heavy lifts the data and processes complex calculations)
- Pandas (A Python module to lift large data)
- Bulma (A CSS framework for fancy views)

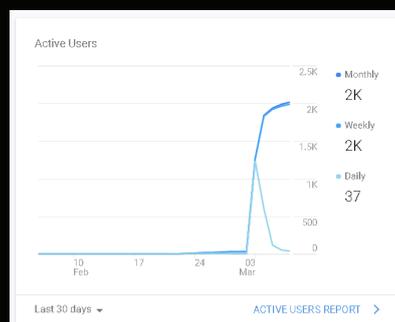


The project won **Rs.10,000** and a place in the hall of fame at Hackerearth. It currently has a total of **2,204 users** all over the world. The analysis and the source code is open sourced on github at <https://github.com/sanvishal/Exoplanet-Explore>

- AdobeXD (A mockup making software)
- p5.js (A javascript canvas library)
- now.sh (free serverless hosting)

These individual components make up the entire project. Feel free to google to know more about them.

Besides these I made a chat app that was used and loved by people in the campus. To know more about me, visit <https://tkvishal.now.sh>



The exploration of space will go ahead, whether we join in it or not, and it is one of the great adventures of all time, and no nation which expects to be the leader of other nations can expect to stay behind in the race for space.

- John F. Kennedy

Student Project

CLINICON

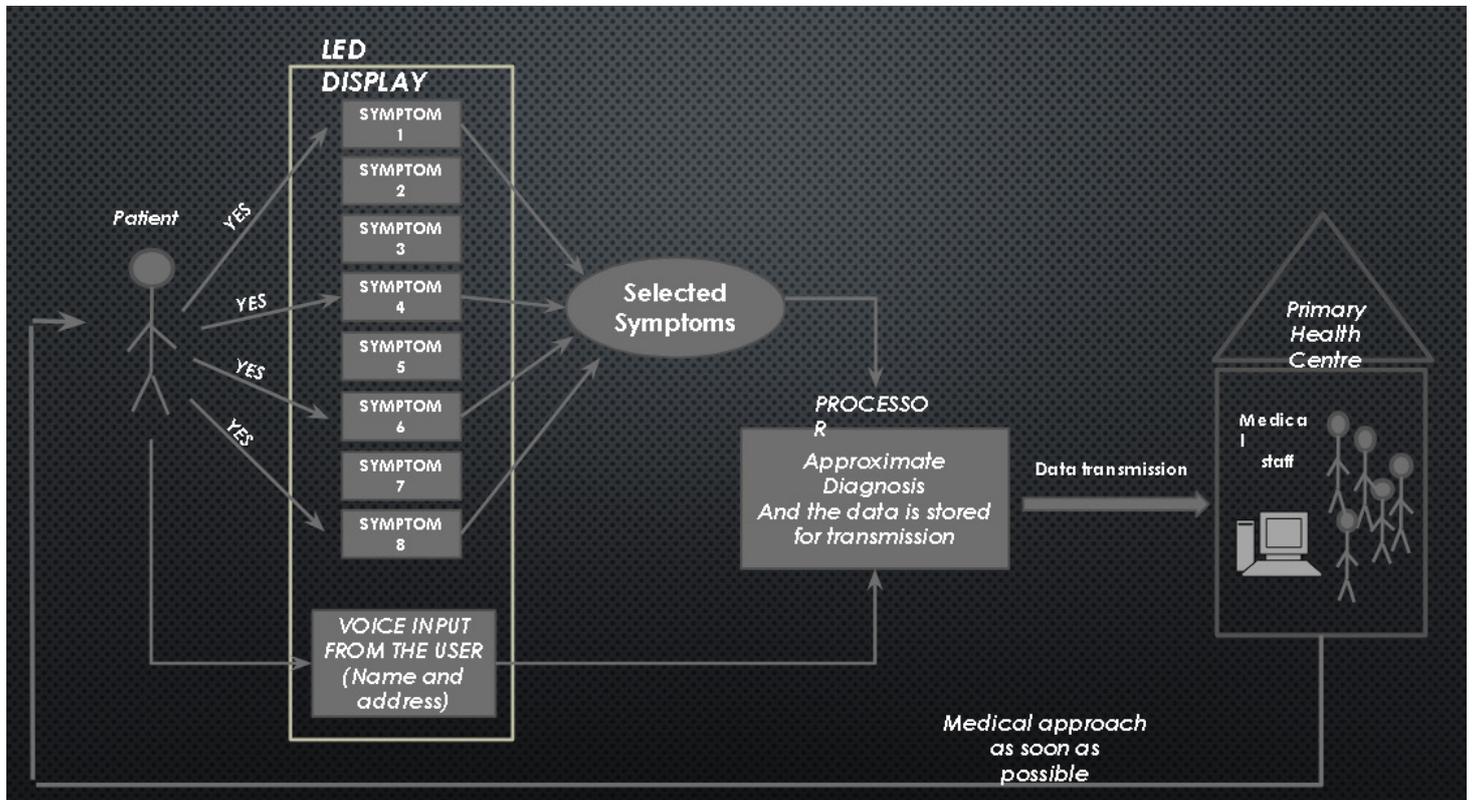
An intelligent Mini computerized Touch-and-display device which is programmed to provide medical surveillance in rural areas

P. Abhishek, M. Sri Balaji, B. Vamsi Krishna, T. Sangeeth Kumar, R. Natarajan
ECE III year (2016-20)

The hardware device (CLINICON) which could make a huge difference over the rural areas, where the people have no idea over the diseases which they are exposed to, and also the areas which are still reported with absence of medical personal. The device is nothing but a microcomputer in which the symptoms of all possible diseases are included into the program in audio format (local language). The device would have a micro-processor, a touch display and a network connectivity device as its major components. The device is provided with two buttons, Green and Red to proceed or decline with the procedure respectively. If an individual feel like he needs medical assistance, the green button is pressed and the procedure is begun. The speakers provided would recite the symptoms one by one and wait for the input from the user. Based on the symptoms which are provided the program starts to scrutinize itself and thus, an approximate confirmation of the disease is obtained. The device would provide home remedies for common devices though a PRINTER which prints the prescription. Whereas, if the patient is found to have a much serious disease, a message is sent to the nearest Public Health Centre for help and to prevent further spread of the disease.



The design and construction of the device can be segmented into input, output and the processing unit. The input from the user is received through a keypad (Green and Red buttons). A camera and A microphone is also present in order to take a picture of the patient and the microphone to record his/her understanding about the disease. The processing unit which consists of a microprocessor, is where the inputs from the user and saved and processed. The approximation of the disease is confirmed in the processing unit. The processed data is then transmitted to the nearby PHC (Public Health Centre) through the output unit, which consists of a Network connectivity device (Wi-fi modules). The selected rural area with a population (say 100) can be provided with this tool, which can potentially serve as a Medical consultant. The given hardware has an LCD display with a number pad.



HOW IS CLINICON DIFFERENT ? OR WHY ARE THE OTHER METHODS INEFFICIENT ?



18% of the PHC's don't have a doctor.



Timely Health Care



Eliminates the need for human interaction



The User/Patient Feels confident.

HIGHLIGHTS OF OUR DEVICE:

In India, almost 27% of the people die each year due to the lack of medical assistance when they most need it. A lot of people living in the rural areas don't even have the awareness about the diseases which they are exposed to. Even if the symptoms of the diseases last long than a week, they choose to avoid it.

Tech Comics & Doodles

Expressing basic scientific principles through a comical representation

- Jeevitha ECE II year (2017-21)



* A Electric Eel fish has 3 main electricity producing organs ,
 Composed of electrolytes which are responsible for producing current.
 Electricity is generated by momentarily reversing the polarity of these
 cells which create a sudden voltage difference and hence
 current is generated. It can produce electricity with the range
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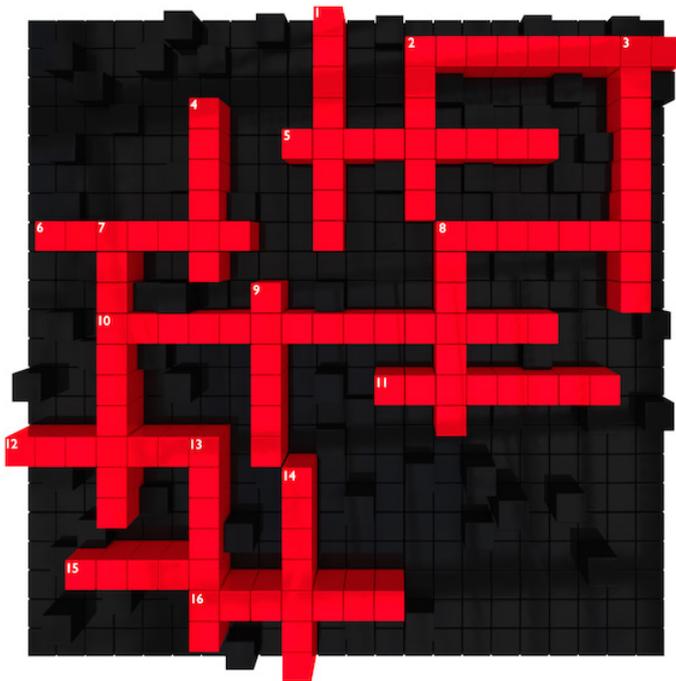
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Crossword Puzzle

Test the level of your understanding in the basics of Electronics - Dhanush Narayanan ECE II year (2017-21)



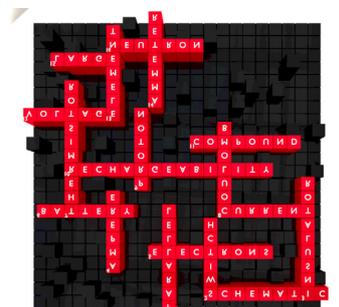
Across

- 2. A diagram that shows the electrical connections of the electronic components
- 5. Current is considered to be the movement of _____.
- 6. A voltage source that converts chemical energy to electrical energy
- 8. A flow of electric charge
- 10. A characteristic of a secondary cell
- 11. A material that is composed of a mixture of elements
- 12. The term used to designate electrical pressure

- 15. A short circuit will have a _____ current flow.
- 16. The part of an atom that has no electric charge

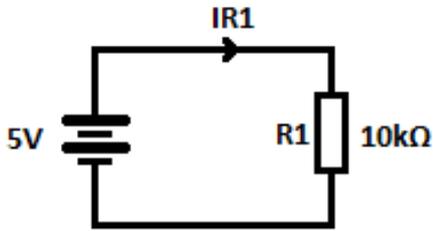
Down

- 1. A voltmeter is used in _____ with the circuit.
- 2. A device that opens or completes an electrical path
- 3. A material that opposes the movement of free electrons
- 4. One coulomb passing a point in one second
- 7. A resistive component that is designed to be temperature sensitive
- 8. A unit of charge that contains 6.25×10^{18} electrons
- 9. An atom's atomic number is determined by its number of _____.
- 13. A substance that is found only in its pure form
- 14. It is used to measure current.



Quiz

What is the value of I_{R1} (current through $R1$)?



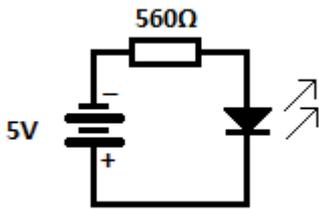
- 1) $I_{R1} = 0.1\text{mA}$
- 2) $I_{R1} = 5\text{mA}$
- 3) $I_{R1} = 0.5\text{mA}$
- 4) $I_{R1} = 1\text{mA}$

What type of transistor is this one ?



- 1) Triac
- 2) Thyristor
- 3) NPN
- 4) PNP

Will the LED turn on?

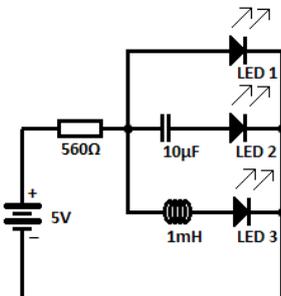


- 1) YES
- 2) NO

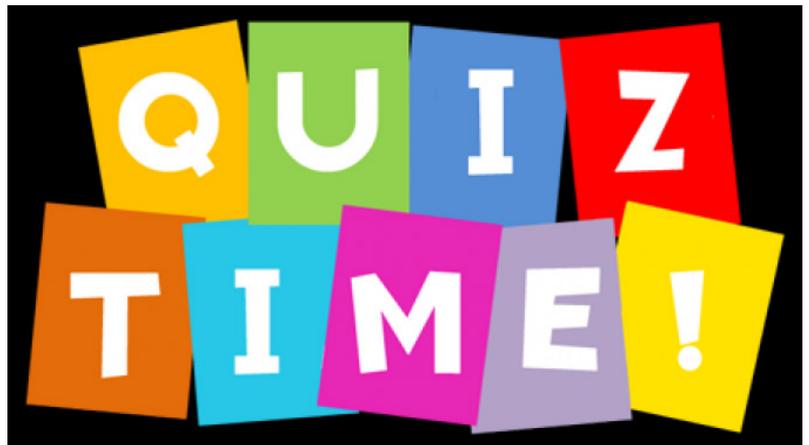
A bipolar transistor usually has:

- 1) 2 Terminals
- 2) 3 Terminals
- 3) 4 Terminals
- 4) 5 Terminals

Which LED will turn ON?



- 1) only LED 1
- 2) only LED 2
- 3) LED 1 and LED 3
- 4) LED 1 and LED 2





Alumni Experience

Hear it from the people who've been here and enjoyed the journey.

- Ms.V.Yogeshwari Program Analyst & CTS (2011-2015 Batch B.E. ECE)

One of the most interesting stages in life that gives you an opportunity to explore is the 'college phase.' Life at college is the time when the teenage years end and we all dive deep into the ocean of new beginnings and possibilities. This golden period better equips you for all the challenges you'll face in life and creates a strong foundation of knowledge.

My experience at Velammal Institute of Technology has taught me one fundamental thing – life is unpredictable. It might be good, it might be bad, it might be weird, and it might not interest you, but expect anything to happen. For example, you might have a wonderful job this moment, and be fired the very next moment. College life prepares you for all of this.

It is a perfect blend of joy and hardships. You meet different people, you interact with them, you learn about their cultures and grow as a person. You will understand how to talk to different people, how to judge their behavior, thus helping you with important life skills.

You learn to sit through a boring lecture; you try to cope up with the surprisingly strenuous syllabus, and you have the opportunity to learn from some great research minds. Academia, as they say, never lets you go free. People might try to motivate you by telling that you need to study only through your school years and chill during the college life, but that isn't true.

Another life lesson you will remember – the learning never ends. You find



campus groups or student groups where you can explore your co-curricular skills along with many other students like you. So, one fine day when you see pictures from the college of you and your friends having a good time, you'll definitely land up smiling silently. That's the beauty of college life. It stays with you long after you've climbed those ladders of success and forgotten the name of that cute crush you used to drool over.

Excelsiors'

Showcasing students who possess a variety of skills excluding academics

SanjayKumar V.M III Year ECE B (2016-20)

Honorary Doctorate Award (April 2018)

“As a honor of my 13 Years of social service & Universal Press Media Education Vidyapith”.

I have been awarded with a Honorary Doctorate Award In April 2018. For the past 13 years I have been doing this social service by sending money to the poor people's operation expenses. I won't Celebrate my birthday, fire crackers for Diwali and purchase new dresses for festivals

instead I use this money by helping to poor people's operation expenses since the age of 9. Till now I helped 255 poor people for their Operation expenses. I will continue to do this service in all my life time.” Says Dr.VM.Sanjaykumar

SanjayKumar has also represented our country in Second South Asian Youth Games and also is a Gold Medalist in the Under 21 Indian Hockey Team



SanjayKumar has also represented our country in Second South Asian Youth Games and also is a Gold Medalist in the Under 21 Indian Hockey Team



E C E 2019



“I played for the Indian hockey team in the 2nd South Asian Youth Games 2018/19 held at Bhutan (June 2018). I won Gold medal in the 2nd South Asian Youth Games 2018/19 In Hockey By Representing Team India. I also Participated In 6 All India Nationals By Representing Tamilnadu Hockey Team”

Dr.VM.Sanjaykumar

The Kuruma Kuruvinga

P. Abhishek, R. Natarajan III year ECE A (2016-20)

This Trio of Musicians loves music more than they love themselves - Abhishek P & R Natarajan of 3rd Year A section from the department of ECE (2016-20). Adithya Sriram, Music producer from Sri Venkateswara college of engineering, is not only their best friend but also Programs and Arranges tracks for them. They have did an ample number of cover songs in Both English and Tamil. Their Youtube Handle "Kuruma Kuruvinga" is pretty popular in Youtube and known for their Choice of Songs. Thanks to the Visuals and Edit support from J.G.Manoj who's also our very own product of Velammal.

"We felt music means more to people than just the sound, Music gives something to them, We call it hope" exclaims the excited Musicians.



@_artsculpt_

T. Sangeeth Kumar III year ECE A (2016-20)

Sangeeth Kumar, always had an interest in Arts and Crafts. Sangeeth says “Arts and Crafts kept me occupied. It made me feel happy everytime I did something new, you can always see Scissors and Origami sheets lying around the floor of my home. I was given a Pencil lead carving as a gift from my friend for my birthday, It was fascinating to see how talented people were and I was awestruck to see my name written on a pencil lead. I learned to do that myself and posted it in social media. It got popular and people asked me to do it for them. I started earning for something I love doing”. That’s something really beautiful.





Placements & Higher Studies



Impossible?

“No” says Lianne Rachel Johnson

Lianne Rachel Johnson IV year ECE (2015-19)

ECE 2019

Do you still have unachieved dreams? Has engineering sparked an interest in you to know more? Are you aiming for a better career with better job opportunities? Do you like adventure, travelling abroad and experiencing different cultures? If you have answered most of these questions with a yes, then a Master's degree is perfect for you.

Pursuing a Master's degree is an important decision which has to be decided by you and your family. It is highly advantageous if this decision is made as early as possible. Universities abroad look for high performing students who are clear in their goals and have a passion to study. I would like to share with you steps to apply for a Master's program abroad and tips to get into top-ranking universities.

Firstly, your *CGPA is important*. A lot of students take their undergraduate education lightly. However, all universities have a minimal GPA cut-off and it is important to have a decent CGPA, preferably above 8 if you are aiming for a good university. The main reason for this is that, they want to know if the student is serious about their education, consistent in their efforts and willing to succeed.

Participate, participate, and participate! Universities look for all-rounded individuals who not only study well but also participate in co-curricular and extra-curricular activities. They prioritize students with research papers published in journals and those who actively involve themselves in conferences and projects. They also appreciate students who have taken up leadership positions. I would like to stress on the importance of all of these because students who have low CGPA's have received admits from top-ranked universities because of their projects and publications. Do not wait for the last two years to begin this step, instead start early. Get help from your Professors and seniors, and soon you will not only have a great resume, but you will also learn and gain experience.

Internships are also highly valued as they are a form of work experience. Apply to places where you know somebody, as you will have a greater chance of being accepted. I would suggest that you opt for internships over in-plant trainings as they have a much higher value. Internships, projects or publications within the domain

that you plan to pursue for your Master's degree would be an added plus point to your resume when reviewed by the admission board.

Students involved in sports receive high commendation abroad and have a high chance of getting sports based scholarships if they show proof of participation in the National or International level. Proof of speaking, writing or teaching skills will be advantageous to help you attain teaching or research assistantships abroad. Being a member of professional bodies such as the IEEE, IETE etc. will also be an added value to your resume.

Plan ahead. Identify the degree that you would like to pursue and the country in which you would like to study with regard to the reputation of the program within that country as well as availability of job opportunities. For the US, the MS program is a thesis based program meant for students who wish to continue with their Ph.D. while the ME program is a more practical program meant for students who would like to begin working.

Determine the requirements of the universities within the country and plan ahead. Most colleges in the US require the GRE/GMAT and the TOEFL/ IELTS examination. Take care while choosing these exams as different countries/ universities have different exam requirements. For instance, Germany does not require a GRE and certain countries prefer IELTS over TOEFL. Usually, UK, Canada,

Australia, and New Zealand prefer IELTS while USA prefers TOEFL. However certain universities in the USA may also accept the IELTS and vice versa. GMAT is for students who wish to pursue an MBA.

Prepare. Try to begin your preparation for these examinations at the earliest. It is ideal to start in your fourth or fifth semester if your target is to join the university during Fall (August). Avoid applying for the Spring (January) semester as most colleges do not accept international Spring applications. My suggestion is, to begin with the GRE exam and then proceed to the required English exam, as the verbal section of the GRE will prepare you with the skills required for the English exam. Your GRE result is extremely significant to get you into a top-ranking institution as it is one of the most important ways for the university to measure the academic ability of students from different parts of the world who come from different academic backgrounds. All universities have a minimum TOEFL/ IELTS cut-off score and a good score can be beneficial for a teaching assistantship. Prepare well and take several mock tests before your big day.

Apply. The next step involves recognizing 4 to 8 universities, 70% of which are at your academic level, 20% of which you can be confident that you will get through and 10% of which are your dream colleges. Choose your universities carefully and consider their tuition

fees, program ranking as well as the environment while making your decision. For Fall, it is important that you complete the previous steps by September so that you can get ready with the necessary documents for the application process.

A transcript is a form of consolidated mark sheet provided by Anna University and is usually required for application to most colleges. It is suggested that you go to the Anna University office a couple of weeks in advance and apply while providing the necessary documents along with the payment as specified in the Anna University website. Make sure that you submit your application before the priority deadline. An early submission of the application would convince the board that the individual is truly interested in the university. GRE/GMAT and TOEFL/ IELTS score reports must be ordered and transcripts must be sent by courier (if required) several weeks in advance. Identify potential recommenders and request them to prepare recommendation letters with the college letterhead. These letters must be sent directly to the institution by the recommenders. The recommendation letters (LOR's) and the statement of purpose (SOP) is extremely crucial in any application. It must be unique and speak of the individual's qualities and abilities which would convince the reader that he/ she will succeed in the program. The SOP which is written by the applicant must ooze with passion and should talk about achievements, goals and how that particular

university is the best fit for the applicant.

Once the application process is complete, the wait begins. Meanwhile, if required, begin considering the process for the application of loans. Private Banks have higher interest rates when compared to National Banks such as the SBI. However, application for loans at private banks are speedy while National banks have a tedious process and require additional effort. Once you have received acceptance letters, you can decide on which university to attend and further apply for your visa. Studying abroad can be challenging but at the same time can provide opportunities for growth, both academically and for you. I encourage you not to settle for less but strive for greater heights.

- Wishing you all the best.



HOW TO GET PLACED IN A COMPANY

Success is No accident

B. Gnanasankari IV year ECE B (2016-19)

Hi, Each and every one of you have an unique dream, some want to get placed in a core company, some in an IT industry. Some of you want to pursue higher studies, some want to become an entrepreneur. Some want to do family business. The desire of each person's life may vary. Those who want to start their carrier as an employee in an industry this article will definitely help you to attain your goal. Generally, the companies are categorized in two ways,

1. Product or service based Company.
2. Core Company.

To get into Core Company:

Getting offer in a core company is simple than getting in an IT industry. Need to have a complete knowledge about our core subjects what we have learnt so far. Simple mantra is "Stop Studying the subjects and start Learning". Current world is a competitive world, we all have to equip ourselves so that we can sustain in that. There is no mercy and no frees, one who can adopt to the new technologies can able to get and survive in this corporate world. So start to equip you all now itself.

The rounds in the core company:

- Aptitude plus technical MCQ's
- Face to Face interview (Technical and General HR rounds)

For first round, go through RS Aggarwal book, India Bix, 2braces, Exam Veda websites and know some basic concepts in all subjects to clear this round. For second round, main thing to clear these rounds is to have more faith and confidence upon yourself. Communicating language is secondary, have to deliver the content which you are coming to say clearly and boldly though you are not sure about that.

To get into IT industry:

Have to learn many things apart from your curriculum, this shows how much interest you are having in learning new things. As an ECE student if you are well versed in programming equal to CSE student, preference will always been given to us.

Rounds in an IT industry:

1. General and Technical Aptitudes
2. Programming round
3. Group Discussion
4. General and Technical HR

First Round: As I said above go through all the sites which is enough to clear this round.

Second Round: Have to write a program for the given scenario more effectively. I will tell you all secret or mantra which I always use to solve a particular program. First go through the given scenario and see the sample test cases. If you can able to understand the sample input and output then it is easy to solve the code. See, The Computer is a senseless machine, we need to tell everything clearly so that it can do. Just back track your mind, while you read the input and output samples how your mind have understood that. If you found that way, that is nothing but an algorithm. Once algorithm is framed writing program is so simple. So for all the problems, you will definitely have the solution in your mind, the only thing you need to do is search for it without getting panic.

Third Round: To clear this round, a simple quality you should have that is having a faith and confidence upon you and you should possess a sound listening skill. You need to believe that you can do!!

Fourth Round: As I said previously, you have to speak clearly and boldly and instead of speaking unnecessarily have to strict to the point.

Mostly all the companies will have the same interview process like I mentioned above. Don't get worried if you don't know anything till now..."Never it is too late to start a thing" so start working towards your dream by today itself...Because no one knows what tomorrow will bring. Whatever the situation may be never let you to

hate yourself. If everyone demotivates you, never let your heart to accept that. Those who all are achieved big, loved themselves more than anyone. If you had a faith upon you, though you don't know how to solve a particular problem in your life your mind and heart will surf it for you. "World is full of Opportunities" for those who searched for it. Always keep in this in your mind, "Whenever there is a problem there will be a solution for that particular problem". For every problem the solution will always be simple. The only thing we need to do is surf for it. This is applicable to life as well as for the program...

ALL THE VERY BEST to all and wish you all to have a wonderful life and future...



Photos of the year #nofilter

Skywarz. Organised by the students of ECE





ECE - B (2015 - 19 BATCH)

ECE - B... It is not just a class it's a kind of Zion. A class which is enriched with all type of talented minds. We never talked too much with other gender mates. But the affection upon us have never faded. If one faces any problem, we never let them to face alone. As many helping minds are in the class, at an equal ratio we also had who makes fun of each other. But without them, the college life would have never been so fulfilled. Getting involved in all types of atrocities and getting suspension is always our first priority thing to do as a student and instead of regretting for what we have done, we will feel proud about them. Each day will start and end with a curse from the faculty members. But we never failed to make them proud with our results. Not only academic wise but also we have explored our talents outside the college. Only our class stood as the most prize winners by attending other college events in our 3rd year of our academics. Particularly in sports, we had state level players too.

For what we have done in these 4 years, the college can never forget the batch ECE B 2015-2019. Faculty's used to say they had never seen any worst class like this and they always complete the sentence by praying the God to not to give such notorious class in the future. But they support us like pillars during all the hard times. Most importantly without our HOD Sri devi Mam, we could not have survived through all the hard ships that we chose to sail into. Till the last day of our academics, we never listened to any faculty words inside the class and we will get paid with balance when we are crying to get no due signatures. Each and every staff members will be in our heart till the end and we wish that we all will succeed and make them feel proud by our future progress.

Bon Voyage



நல்ல தலைவன் எங்கே உருவாகிறான் என்ற கேள்விக்கு பதில் எவன் ஒருவன் மற்றவர்களை மனதார பாராட்டுகிறானோ ,தன்னை சுற்றி உள்ளவர்களின் உணர்வுகளை மதித்து நடந்து அவர்களின் செயலை ஊக்கப்படுத்துகிறானோ அவனே நல்ல தலைவனாக உருவாக முடியும். அப்படியொரு தலை சிறந்த தலைமை குணங்களையுடைய எங்கள் வகுப்பு மாணவ மாணவிகள் அனைவரும் இந்த தேசத்தை ஆளக்கூடிய, வருங்கால தலைமுறையினரை நல்ல வழியில் நடத்த கூடிய தலைமை பொறுப்பிற்கு வருவோம் என்பதில் எவ்வித மாற்றுக்கருத்தும் இல்லை.

Once a Holy man was asked “What is Forgiveness”. He replied, “It is the fragrance that the flowers give when they are crushed”. Teenage is the age life teaches you what it really is but hold on for you have the strongest of hearts. Learn to forgive for we all have sinned Whatever that you’re going through now is going to pass. You might struggle, but you will last <3

