THIAGARAJAR COLLEGE OF ENGINEERING

A Govt. Aided Autonomous Institution Affiliated to Anna University

Department of Information Technology

Proudly Presents

iTunes

INNOVATING CREATIVE MINDS

WORLD OF 3D

WHERE YOU SPEAK WITH POLYGONS

FEB - MAR 2022

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The Perfect Choice for the Creative Ones

VISION AND MISSION

VISION OF TCE

World-class quality technical education with strong ethical values.

MISSIONS OF TCE

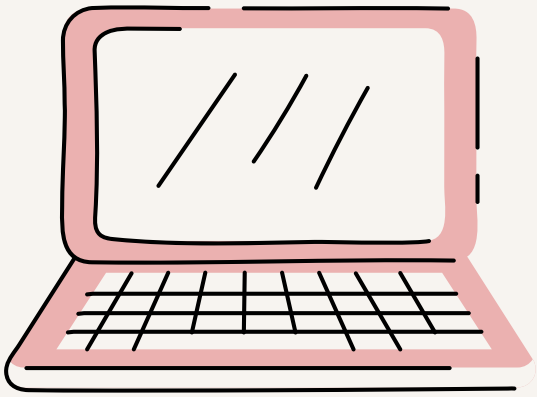
• Academic excellence in Science, Engineering and Technology through dedication to duty, commitment to research, innovation in learning, and faith in human values.
• Enable the students to develop into outstanding professionals with high ethical standards capable of creating, developing and managing global engineering enterprises.
• Fulfill expectations of society and industry by equipping students with state of art technology resources for developing sustainable solutions.
• Achieve these through team efforts making Thiagarajar College of Engineering the socially diligent trendsetter in technical education.

VISION OF IT DEPARTMENT

Evolve into a Centre of Excellence for education and research in information technology

MISSION OF IT DEPARTMENT

• Attaining academic excellence through well designed curriculum adaptable to dynamic technological needs, competent faculty and innovative teaching learning process.
• Promoting collaborative research through special interest groups, state of the art research labs and industry institute interactions.
• Facilitating value added courses to produce highly competent and socially conscious information technology professionals and entrepreneurs.



PROGRAMME EDUCATIONAL OBJECTIVES

B.TECH (INFORMATION TECHNOLOGY) PROGRAMME

PEO 1. Graduates of the programme will provide IT solutions to address the business and societal needs.
PEO 2. Graduates of the programme will contribute significantly in the technological developments of Information Technology through research practices.
PEO 3. Graduates of the programme will hone their professional expertise in quest for improved career opportunities through sustained learning.
PEO 4. Graduates of the programme will lead a team of diversified professionals with good communication skills, leadership virtues and professional ethics.

PROGRAM OUTCOMES

Engineering Graduates will be able to:

1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural science, and engineering sciences.
3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

EDITOR'S DESK

Dear Readers,
It's indeed a pleasure to interface with your thoughts through another issue of our own ITunes magazine. TCE has always been a future first organization, rightly driving the students community towards the future. There had been an Era when Electricity was considered a marvel. Then came an Era when the internet was considered one. We all are now witnessing an era where data is considered as the new fuel. And very soon, it's going to be Artificial Intelligence. To make it fully possible and take the benefits across to the last mile user, other allied technologies such as 5G, Smart Networking, Big Data and IOT are crucial. At the IT department, we ensure that the curriculum covers all these cutting edge technologies. And maximum possible exposure is provided through hands-on practice and other activities.

Life is all about learning and reflecting. Irrespective of the age, at every phase of our life we learn something and reflect on the same. At some age, we learnt to speak. At some age, we learnt to write. At some age, we learnt to be well-behaved socially. What we are now is just the reflection of what we have learnt in the past. What we will be in the next 2-5-10 years would depend upon what we learn now. I feel college is where you learn to be a professional. It requires intellect, persistence and ethics to be an engineering professional. The four years you spend at college should be well spent in achieving excellence, never give-up attitude and sense of responsibility. Youth is your biggest advantage and putting it to right use is of utmost importance. Because the qualities you build, the skills you acquire when you're young, would determine the quality of life you will lead in the next 10-15 years. Your energy is precious. Spend it on the right things.

SIGs, Technical clubs, Non technical clubs, cultural clubs, student chapters of professional bodies at our college are meant for channelizing your energy in the right avenues. Opportunities are plenty. Identify and tap them. In fact, ITunes is one of them. I also take this opportunity to invite more of you to publish your creations on this platform.

We are happy to have received and published articles from our I year students in this issue. Special thanks to my dear colleagues Prof Dr D Tamilselvi and Prof Mrs CV Nisha Angeline for their heart warming articles.The editorial would be incomplete without thanking my team of student editors, who have been the heart and soul of every issue of ITunes.Special mention to Mr. M. Suresh Kumar of Third year for his efforts in publishing this article.

With Best Regards,
Thiruchadai Pandeeswari
Editor, iTunes

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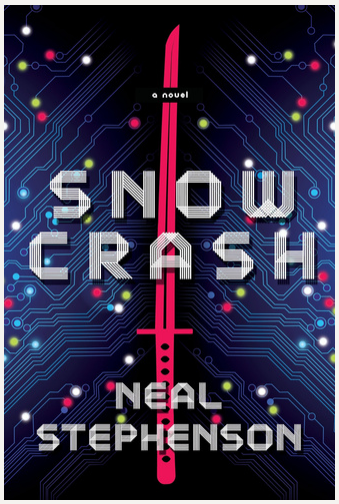
What Is The Metaverse?

The metaverse is a concept of an online, 3D, virtual space connecting users in all aspects of their lives. It would connect multiple platforms, similar to the



internet containing different websites accessible through a single browser. The concept was developed in the science-fiction novel Snow Crash by Neal Stephenson.

However, while the idea of a metaverse was once fiction, it now looks like it could be a reality in the future.

The metaverse will be driven by augmented reality, with each user controlling a character or avatar. For example, you might take a mixed reality meeting with an Oculus VR headset in your virtual office, finish work and relax in a block-chain game, and then manage your crypto portfolio and finances all inside the metaverse.

Besides supporting gaming or social media, the metaverse will combine economies, digital identity, decentralized governance, and other applications. Even today, user creation and ownership of valuable items and currencies help develop a single, united metaverse. All these features provide blockchain the potential to power this future technology.

Metaverse examples

SecondLive

SecondLive is a 3D virtual environment where users control avatars for socializing, learning, and business. The project also has an NFT marketplace for swapping collectibles.

Axie Infinity

Axie Infinity is a play-to-earn game that's provided players in developing countries an opportunity to earn consistent income. By purchasing or being gifted three creatures known as Axis, a player can start farming the Smooth Love Potion (SLP) token.

Decentraland

Decentraland is an online, digital world that combines , social elements with cryptocurrencies, NFTs, and virtual real estate.

On top of this, players also take an active role in the governance of the platform. Like other blockchain games, NFTs are used to represent cosmetic collectibles. They're also used for LAND, 16x16 meter land parcels that users can purchase in the game with the cryptocurrency MANA. The combination of all of these creates a complex crypto-economy.

- SATWIK BOLAR, 20IT090
2nd Year

Genuine Love!

- Mrs CV Nisha Angeline
Faculty , Dept of IT

Dear Students,
I take this opportunity to share a story which is close to my heart and my reflections on the same. Am sure, you would resonate the sentiments shared and understand the essence of it positively.
This is about my father's friend. This old friend of my father, who is in his sixties met with an accident and his total neural system collapsed. His head and his whole body will never stop shaking. He was not able to go to work after this accident. He visits us sometimes and we give support to him to the best of our efforts. A few weeks back when he came to my house, he was very depressed and shared the reason. This friend had a daughter and the previous day she eloped with her boyfriend and got married to him. The girl was the sole breadwinner of the family and the man's entire hope. He was so frustrated that she left them alone and even after all this he wanted her to come back or ensure her safety. He kept calling the girl and she kept rejecting the calls. The whole incident was haunting me the past few days. Even normal parents take some time to balance themselves in such situations. For this man's condition, it was a heavy blow on him. On the other hand, I do understand how insecure the girl might have felt for her future having such parents who won't be in a position to get her married or do anything good for her. I couldn't blame both sides.

I still wish that the girl had consulted her parents before the major decision and also tried to convince the boyfriend regarding the situation of her parents. This term “love” is one of the most over-rated words of the Holocene Era. The media especially these half-baked web series on the new-found OTT platforms have taken fullest advantage of this word and twisted its realities to the maximum in the hearts of the youngsters. Today’s love is portrayed between 2 young people who will do anything for each other in a romantic realm. What we forget is, there are other people in our lives - mom, dad, brother, sister, grandparents or friends. Not just people, other fronts as well like career, finance, social presence, community etc., Aren’t they of value to us? Isn’t it love between us and our parents, siblings and friends?

There are many parents who are so deprived of love from their own children that they are so frustrated with the meaning of life. Many youths don’t even call their parents once a day to talk to them and make them feel better. It's high time we wake up and see the reality. Everyone in our life needs our love, time and time and care. Try spending time with your family and loved ones. Consider talking to them asking them about their day. Their wishes and dreams. Try to make at least a few of them true. Organize special events at home to get them out of their routines and make them feel special. Let’s spread true and genuine love towards people around us. The more love we give, the more we will receive - fresh, true and genuine.

With Love,

- Mrs CV Nisha Angeline

Animation Software Used in Walt Disney Studios

Disney & Animation

A lot of people love to watch animated movies, not to mention “DISNEY ANIMATED FEATURE FILMS”. I, myself, am a crazy fan of Disney Movies. They are known for producing Beautiful Animation films that are mind blowing till date. It is no wonder why each new animated film seems to have more realistic looking elements and aspects today. These advancements in animation make you think of the technology and software behind each successful movie. Read on to understand better, how each software is used and what each software brings into the animation table. I also included a section of Disney-developed software at the end as a bonus.

What animation software do Walt Disney Studios use?

I. Autodesk Maya

One of the most popular 3D animation software suites in the Autodesk Maya, has been used in countless Disney films to create low-resolution models, later developed into the famous Disney characters we love.

First released back in 1998 by Alias Wavefront and was then later acquired by Autodesk in 2006. Recent characters of Disney Animation Studios have been modeled, rigged, and sometimes animated using this software. Many animators are

Many animators are praising the intuitiveness and versatility of this software. Animated movies such as *"Moana," "Frozen II,"* and *"Wreck-It Ralph"* are among the films that used Maya to create and animate their characters.

II. Pixologic ZBrush

Together with Maya, ZBrush is used to sculpt and create more complex characters in a computer environment.

Low-resolution models can be made here too, before letting Maya add more details, But since ZBrush lets Disney animators work on a virtual-clay in real-time, the process of adding more dimension and details if the artist wants to.

Disney animators used this software to create better-looking characters that are believable because of the detail that this animation software can impart to the character.

Movies such as *"Big Hero 6,"* and *"Tangled"* all used ZBrush to create their characters.

III. Houdini

Most visual effects in the recent Disney animated films are done using this software. When creating water, fire, and lightning effects, Houdini is the go-to software for Disney animators. It allows for easy collaboration between different artists and is very flexible with its node-based process.

Houdini can save each special effect and iterates those in the future without really affecting the master copy. Built-in tools allow for an easier workflow and better particle simulation for stunning visual effects.
Houdini played a vital role in animating the ocean and the lava of “Te ka” in the Disney animated movie “Moana.”

IV. Pixar’s Presto

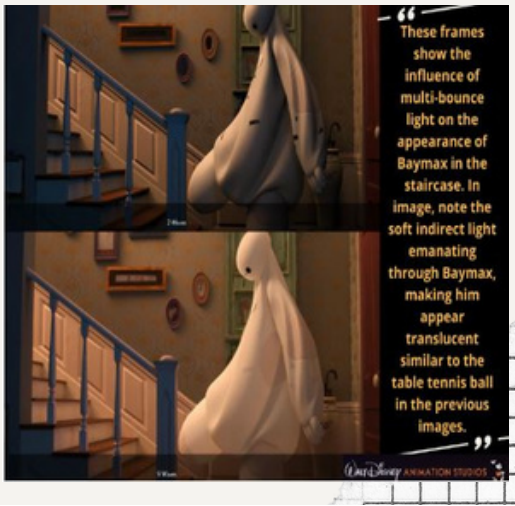
Not much is known about this software because it is proprietary software of Pixar Animation Studio.

There is no doubt that this is a powerful animation software that Pixar developed to cater to its needs.

Developed by Pixar to work together with Maya, it is no wonder why Disney would use this animation software extensively. The software can animate characters, create scene layout, rig models, and many more.
The preview given six years ago during the Nvidia GTC conference is already enough to showcase how powerful this animation software is.

V. Disney Hyperion

Before Hyperion, Disney Animation Studios used Pixar’s RenderMan to render all their computer graphics.
However, because of the growing demand, Hyperion was created. It allows the artist to render scenes faster and with fewer distortions and color changes.



Hyperion is a ray-traced global illumination renderer that traces and shades rays in large batches. It first sorts each collection for geometric coherence during scene traversal, then sorts ray hits for texture coherence during shading. This process produces cleaner and more detailed scenes in the end. Thanks to the movie “Big Hero 6,” that Hyperion was created, and since then, it is the rendering software that Disney Animation Studios use.

VI. MEANDER ANIMATION TOOL

This tool started its journey to being an animation tool for Disney Studios back in 2010. The animation team’s growing need for better and faster workflow created an opportunity for Meander to be created.

According to Disney Animation’s, Meander is a hybrid between a raster and vector drawing system. This means that artists get the high pen or brush customization, responsive drawing, and immediate fast player of a raster drawing system and the stroke editability, image scaling, and stroke in between of a vector drawing system.

VII. PAPERMAN

The main goal of Meander is to allow artists to have unhindered artistic expression and perform as smoothly as paper and pen.

VIII. QUICKSILVER

In the movie "Moana," the creators wanted to give their character's hair simulation an upgrade. It is at this moment "Quicksilver" came into play. This brand new hair system allowed each character to have realistic, dynamic, and believable locks that respond to water, wind, and movements.

In "Frozen 2," another hair system is developed called "Beast" because the characters in this movie have a lot more individual hair to animate and maintain. From the little girl's hair in "Frozen" to the future Queen of Arendelle in "Frozen 2", Anna's hair underwent a transformation that showed maturity and change.

The software allowed animators to simulate more hairs per frame and at a faster rate compared to Quicksilver.

Conclusion

So there you have it, you now have an idea of what animation software Disney Animation Studio uses for their many animated films, plus the tools and other in-house software that were developed to meet the needs of the artists and animators in the team.

It's for sure that Disney will continue to create and innovate better technology with each upcoming project they have.

Avantika,
1st Year

எண்ணம் போல் வாழ்க்கை

- டாக்டர் தமிழ்செல்வி
Faculty , Dept of IT

நம் எல்லோருக்கும் நம் வாழ்க்கை பற்றி ரொம்ப அழகான கனவுகள் இருக்கும் , Personal, Professional Enjoyment -nu , அளவில்லா ஆசைகள் கனவுகள்....
நிறைய பேர் கனவிலே வாழ ஆரம்பிச்சிடுவோம் , ஆனால் கனவு எல்லோருக்கும் நனவாகிறதா என்று பார்த்தால் 10% people தான் கனவுகளை நிஜமாக மாற்றி அழகா சந்தோசமா வாழ்ந்துட்டு இருக்காங்க...40% people புலம்பிக்கிட்டே வாழ்கிறார்கள் 50% people, situation, parents , reason சொல்ல reason கண்டுபிடித்து வாழ்கிறார்கள், அந்த 10%லே successful- ஆ வாழ்ந்து ஜெய்க்கிறது ரொம்ப easy, அந்த secret of success பத்தி 5 நிமிஷம் daily யோசித்து வாழ்வது எப்படினு பார்க்கலாம்.

"எண்ணங்கள் மட்டுமே நம் வாழ்வை தீர்மானிக்கிறது"

அப்துல் கலாம் சிறிய வயது எண்ணங்கள் Rocket கனவை நனவாக்கியது, Sports la Ronaldo, Music la Rahman , Scientists... எல்லா field - லையும் ஜெயக்கிறவுங்க history எல்லாத்துக்கும் ஒரே formula தான்

1. நமக்கு என்ன தேவை, பிடிக்கும், passion பற்றி நாம் மட்டும் தான் தீர்மானிக்க முடியும்
2. தீர்மானம் செய்த எண்ணத்தை நம் கனவாக மாற்றனும் , கனவுனா Cinema , Entertainment பார்த்து நினைக்கிற பகல் கனவு இல்லை
3. மனதில் தோணுகிற எண்ணம், பின்னாடி போகாமல், subconscious mind la நாம் தீர்மானித்த நாம் வாழ்கையில் அடைய நினைக்கின்ற எண்ணங்களை கொண்டு போனும்

எப்படி Subconscious mind ku கொண்டுபோறது? திரும்ப திரும்ப நாம் ஆடையே வேண்டும் என்று நினைக்கும்போது , அந்த எண்ணங்கள் அதுவாகவே, ஆழ் மனதை அடைக்கிறது, ஆழ் மனதில் சென்ற எண்ணங்கள், நம் மூளையின் நினைவாற்றல் பகுதியில் ஆழமாகபதியும்

5. Once subconscious mind- ல் நாம் கனவு கானும் எண்ணங்கள் இருக்கும்போது அது பழக்கமாக மாறுகிறது

6. பழக்கமான செயல்கள் நம் இயல்பான செயல்கள் ஆகிறது, செயல்கள் தொடரும் போது அதற்கான வாய்ப்புகள் உருவாகிறது, வாய்ப்புகள் மற்றும் ஆக்கபூர்வமான செய்யல்கள் மாபெரும் சக்தியாக மாறி நம்மை இயக்குகிறது,

7. எத்தனைமுறை தடைகள், தோல்விகள் வந்தாலும், நம் ஆழ்மனதின் சக்தி தடைகளை மீறி easy ஆக handle செய்யும் மனநிலையை உருவாக்கிறது

8. இலட்சியங்களில் நாம் தொடர்ச்சியாக செய்யல்படும்பொது சாதனையாகிறது

என்னதான் எண்ணங்கள் உறுதியாக இருந்தாலும் ஆழ்மனதில் ஒரு சின்ன or பெரிய பயம் எட்டி பார்க்கிறது, என்னால் முடியுமா? ஒருவேளை முடியலைன்னா ? என்ற Negative thoughts நம் மனதில் தோன்றும்.Physical Fitness போல Mental Fitness ரொம்ப ரொம்ப அவசியம் நம் கனவுகள், எண்ணங்கள், செயல் , இலட்சியம் எல்லாவற்றையும் சேர்த்து இயக்க positive thoughts ரொம்ப முக்கியம்.

Positive Mindset என்பது எது நடந்தாலும் Positive ஆக நினைக்கிறது இல்லை, எல்லாம் நன்மைக்கே (நல்லதோ , கெட்டதோ தோல்வியோ) எல்லாம் என்ற எண்ணத்தை உறவாக்குவது அவள்ளவு easy இல்லை . Positive Mindset என்பது, Ego பொறாமை status, others பற்றிய judgement யை தவிர்த்து, Purity of Mind , பொறுமை எல்லாவற்றுக்கும் மேல் அனைவரோடும்

அன்பாக இருக்கவேண்டும்
என்ற மனநிலையை , கடவுள்
சிலை செதுகுவது போல்
பார்த்து பார்த்து மனதில்
செதுகிடும் போது
எண்ணங்கள் அழகாகிறது.
நம் போட்டியாளர் நாம் தான்
என்று முயற்சிக்கும் போது
அந்த எண்ணங்கள்
விதையாகி, நம் செயல்களில்
மரம் போல் வளர ஆரம்பித்து
வெற்றிக்கு வித்திடுகிறது
கனவு --> எண்ணங்கள் -->
ஆழ்மனதின் எண்ணங்கள் --
> செயல்கள் --> பழக்கமாகி
இயல்பகிறது --> இயல்பான
செயல்கள் --> சக்தியாக
மாறுகிறது --> இலட்சியங்கள்
அடையமுடியும்.

DRUGS AND 3D

Organic chemists make molecules, very complicated molecules, by chopping up a big molecule into small molecules and reverse engineering. So could we make a really cool universal chemistry set at our mobile places?
In essence, could we "app" chemistry?

Now what would this mean, and how would we do it? In order to make this possible Lee Cronin in 2012 took a 3D printer and started to print beakers and test tubes on one side and then print the molecule at the same time on the other side and combine them together in what is called reactionware.
Now what could this mean?

Well if we can embed biological and chemical networks like a search engine, so if you have a cell that's ill that you need to cure or bacteria that you want to kill, if you have this embedded in your device at the same time, and you do the chemistry, you may be able to make drugs in a new way.
So how is this done in the lab?

Well it requires software, it requires hardware and it requires chemical inks. And so the really cool bit is, the idea is to have a universal set of inks that is put out with the printer, and you download the blueprint, the organic chemistry for that molecule and you make it in the device. And so you can make your molecule in the printer using this software.
So what could this mean?

Well, ultimately, it could mean that you could print your own medicine. But to take baby steps to get there, first of all we want to look at drug design and production, or drug discovery and manufacturing.

Because if we can manufacture it after we've discovered it, we could deploy it anywhere.

You don't need to go to the chemist anymore. We can print drugs at the point of need. We can download new diagnostics. Say a new super bug has emerged. You put it in your search engine, and you create the drug to treat the threat. Technology has its own dimensions and uniqueness. It depends on how we use it.

- Rithish R

THE WORLD OF 3D

Most of us would have heard this word, 3 dimension in our primary math class maybe for the first time. At that time we were taught that cube, cuboid and cylinder are 3D objects. But it is something beyond what we think.

Nowadays 3D technology can make your ancestors or a dinosaur or a lion to sit next to you. The evolution of 3D has started in the early 1970s. It can be shortly defined as man-made humans and objects. Along with 3D there was another technology that emerged which is known as Animations. Animations make the 3D objects move and to make actions like how we give animations to texts and slides in PowerPoint presentations.

3D Animations have attracted larger people through movies, cartoon shows and games. 3D Animated characters in many cartoon shows have influenced many small children and made them believe that those characters do exist in their real life.

This is because all the animated cartoon characters possess human behavior. However, it's become widely used beyond these contexts. From corporate ad campaigns to architectural modeling and medical research, 3D animation is used across many industries and for diverse purposes.

As 3D animations make people feel comfortable and understand things easier, many industrialists started promoting their products through 3D animations. Modeling plays a major role in making animated characters. Characters and sets can be

created in dedicated modeling software such as **Blender**.

After modeling here comes the Layout. Designing the stage on which the animation of the character or special effects takes place is known as layout.

Characters and objects need to move under software control. This is done by creating an underlying digital “skeleton” along with rules for how it animates. This process is broadly known as rigging and ranges.

This helps to create very complex movements from simple movements using motion capture.

There are different types of animations such as

- clay animation
- Flip book animation
- Stop motion animation
- Typography animation

Animation will reach out to a larger extent in the upcoming era and will change the life of modern society.

Animation will reach out to a larger extent in the upcoming era and will change the life of modern society.

-Aishwarya N

INDUSTRY EXPERT ARTICLE

Hi everyone, This is **Arun Kumar Somalingam**, I recently got placed at DE Shaw India Software
To say frankly I did not have much hope for DE Shaw as i heard they ask from everything and I had studied only Data Structures and Algorithms, OS and some concepts in C++ and java during the entire summer and I was aiming only for amazon.But still we never know what life has to offer us
Written Test:
20 aptitude-20 mins
20 technical-20 mins
1 algo-20 mins
About 178 students got shortlisted to attend the written test. Aptitude was not very tough if u had practiced from CAT books. But it is the time constraint that makes it difficult to solve.I was able to solve only 5 aptitude question in given time.

But I was least bothered by this and had much hopes on technical and algorithm part. In Technical I was able to answer about 12 questions .And also I was very very lucky as the problem that I worked out the day before actually appeared as the subjective algorithmic question so I solved it in 5 mins.
Results were announced by 3:40 pm and I came first among all 178. About 16 got shortlisted here.
Technical Round 1:
Interview started by 4 pm and they were asking several questions from all subjects I learnt so far. Here are the questions they asked me:
1)How will you include the library in C?
2)What is the difference between #include" " and #include?
3)What will happen if I give the library file present in local directory in #include?

4)What is the use of volatile keywords?
5)Explain virtual keywords in C++.
6)How will you call the base class method using the virtual keyword?
7)Explain connectionless and connection-oriented.
8)Is the internet connection-oriented?
9)Explain the protocols that you use when you access the internet.
10)Explain the working of various layers when you are using the internet.
11)Project based question: Why does Hadoop run faster?
12)Explain working of Hadoop that makes it to run faster.
13)What is cloud computing?
14)Explain register keyword.
15)What will happen if registers are not available when you use the register keyword?
16)How many registers are present in a processor?
17)Explain memory hierarchy.
18)How many levels of cache are there?
19)What makes the cache run faster?
20)Explain the working of cache using a C program.
21)Explain multiprocessing.
22)Explain multitasking.
23)Explain virtual memory.
24)Explain paging.
25) Explain segmentation.
26)Explain internal and external fragmentation.
27)Which has internal fragmentation and which has external?
28)Which is more advantageous? Paging or segmentation?
29)Is it possible to have segmentation with paging?
30)Why do we need an index in DBMS?
31)What DS would you use for indexing in DBMS?
32)Explain BST.
33)When will BST will have worst case and how will you manage it?

34)Time complexity of quicksort.
35)When quicksort runs best and when it runs worst?
36)Difference between multitasking and multiprocessing.
37)How will you handle worst case in quicksort?
38)How many processors are there in i5 and i7?
39)Explain variable arguments in C?
40)What would happen if we don't give var_end?
These are the questions that I remember in this round.
I asked about 5 questions to them about DE Shaw.
Results came by 11:30 pm. I still did not have much hope and I was preparing only for the Amazon interview. I was shortlisted for next round but I was ranked last after this round.

Day 2:
I came to placement cell by 11 am but I was not interviewed for anything till 1:15 pm while all others had at least technical or HR completed. There were two rounds for all of us. Finally I was called for a technical interview.
Technical Interview 2:
Luck played its role again!!! This time it was a pure DS round and I was very relieved as it was my strength. For all others there were only few questions on DS but I was very very lucky here.
1)Implement queue using 2 stacks.
2)Find minimum in a stack in O(1)
3)Tower of Hanoi
4)Virtualisation concept
5)Pointers to function
6)Given an array of 0's and 1's sort it such that 0's come first and 1's come next in O(n)-I gave counting sort approach

7)Solve it in a different approach-I using quicksort partitioning method
8)Number of set bits in an array
9)Egg dropping puzzle
The interview got over by 3:15 pm.
All the questions are very easy and I had practiced all these problems but I still took a leap of faith and decided to derive the solution there ...and it worked...also the white paper coding I practiced for Amazon helped me a lot here.
Again I asked some 5 questions about DE Shaw.
The moral of the story is "You can only connect the dots looking backwards.You cannot connect the dots looking forward"- Steve Jobs
HR:
I got the HR interview by 4 pm
1)Tell me about yourself?-
After saying personal details I concluded as "I would describe myself as a person who actually knows a very little about everything but wants to know everything about something"
2)Have you found that "something"?
I said I have interest in DS
3)What are your hobbies?-She saw philately in my resume and asked about it. Then I told my other hobby is playing video games. She asked about my favorite video game. I said Fifa and "Crysis".Then I explained about Crysis and it was surprise from a lady interviewer telling "sounds interesting" on a video game.
4)Why DE Shaw?- I used the post by our senior Arjun Gurumurthy on his DE Shaw experience
5)Where do u see urself after 10 years
6)Was the workshop conducted before pre placement talk useful?
7)Explain Cloud computing to a five year old.
8)When did you get interested in Computer Science?

After this they announced the results by 5:15 pm.I was one among the two to be selected. I got a speaker, a diary and a T-Shirt. After this, the placement dean said **“After a very long time a person from the IT department opens up the placement by joining DE Shaw congrats!”**

About D. E. Shaw
The company is known for developing complicated mathematical models and sophisticated computer programs to exploit anomalies in the financial market. D. E. Shaw & Co.

TOP 10 TECHNOLOGIES THE WORLD SHOULD BE READY FOR

Locationless Organizations

In the future, organizations will become highly dependent on digital solutions, reducing the need for a 'facility.'

Cybersecurity

Businesses are seen to mandate cyber-awareness and cyber-resilience for all employees as part of overall health and safety training, rather than just the IT teams.

Distributed Cloud

Utilizing processing power at the edge to filter masses of data is much more efficient than transferring it to a distant remote cloud service.

Increase in Demand for Certifications

Organizations are seeking out employees with qualifications in the relevant AWS, Azure, or GCP cloud service.

Internet of Behaviors

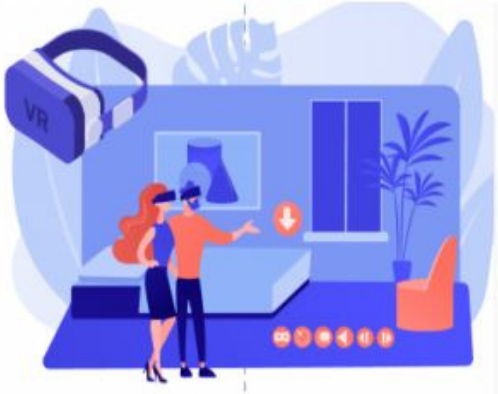
Businesses will look to capitalize on this technology as more and more consumers purchase online.

No Code / Low Code

Gartner predicts that 65% of application development activity will be low code by 2024.

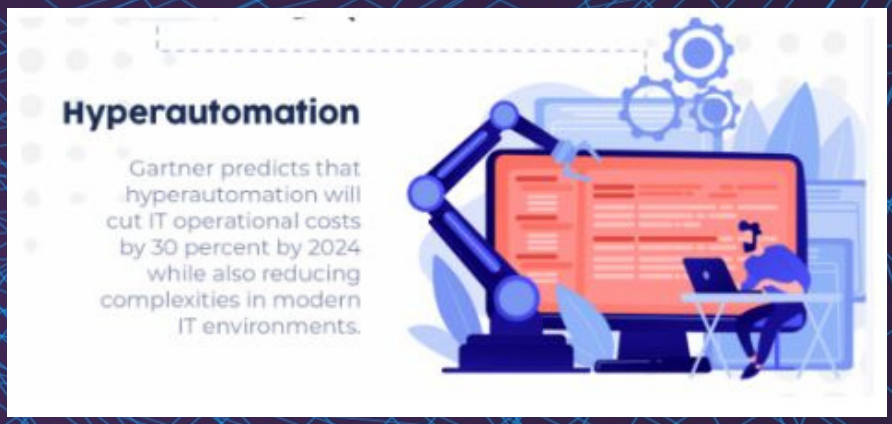
AR / VR

AR is expected to have a lot more applicability beyond gaming and can be implemented more than virtual reality.



Artificial Intelligence

AI will only grow more over the years along with the rise of automation and increase in businesses' digital adoption.

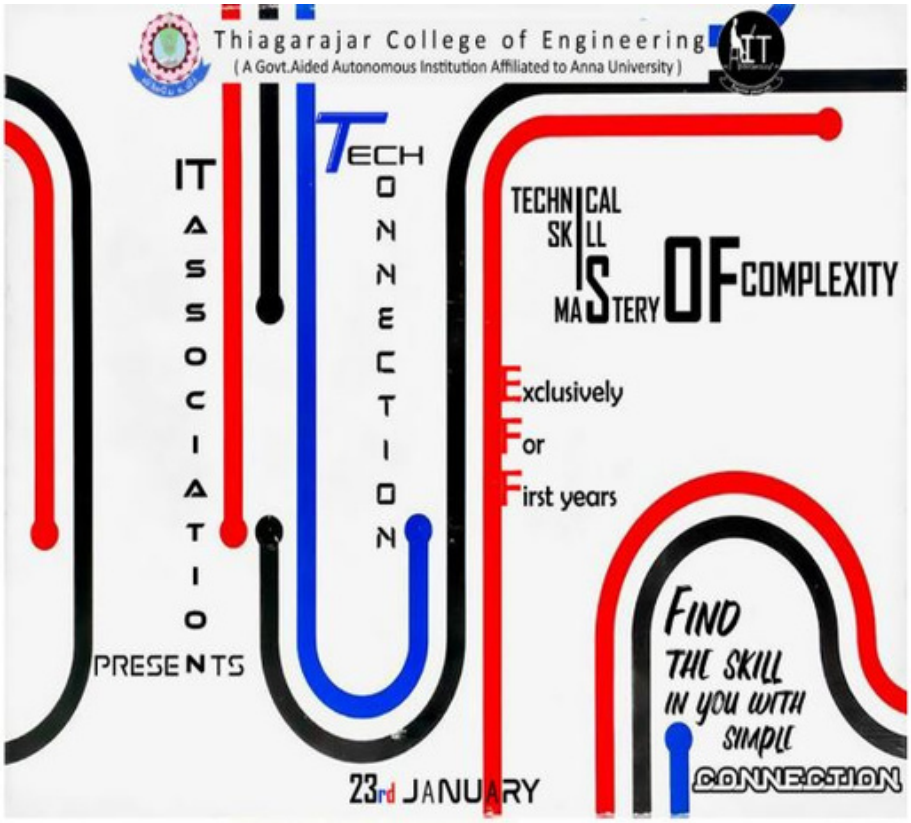


To all fellow mates!
With technology in hand,
Learn everything you can!
It never goes in vain,
For it is always a gain!
Boon or Bane?
It is all part of the game!

ALL THE BEST !

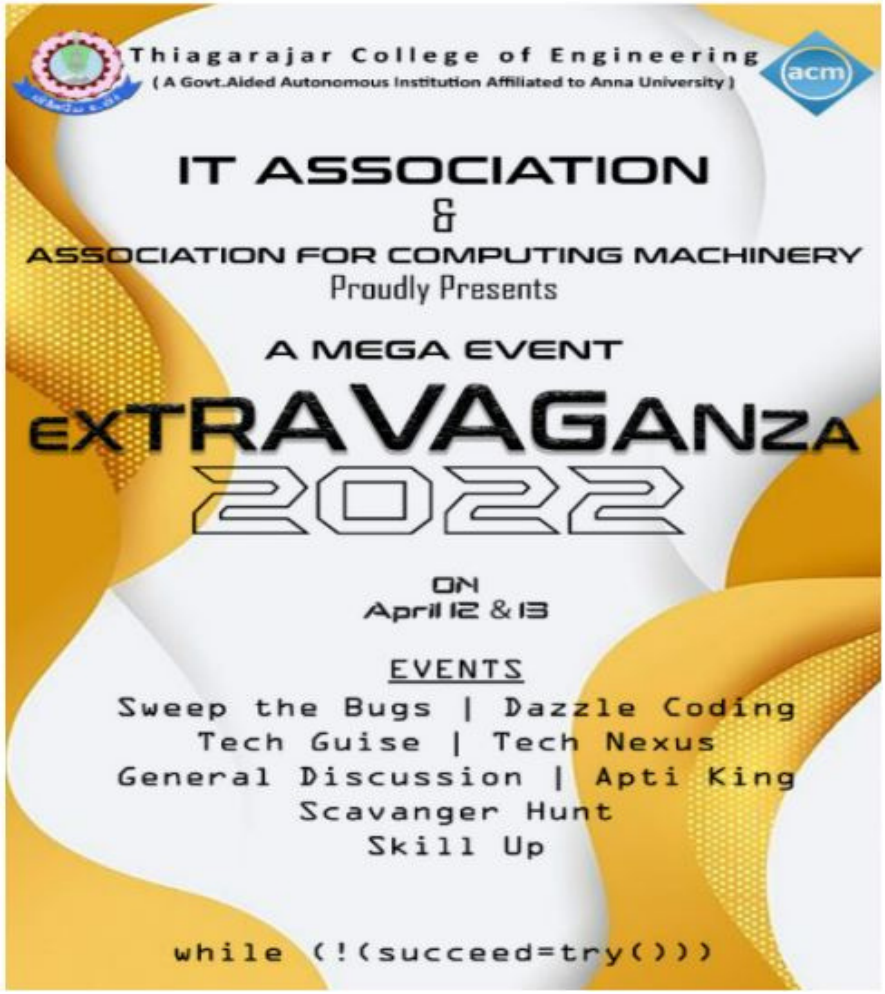
https://www.yondu.com/articles/technology-trends-in-2022-and-beyond/#:~:text=Among%20the%20technology%20trends%20in%202022%20businesses%20should,and%20then%20using%20technology%20to%20influence%20their%20behavior.

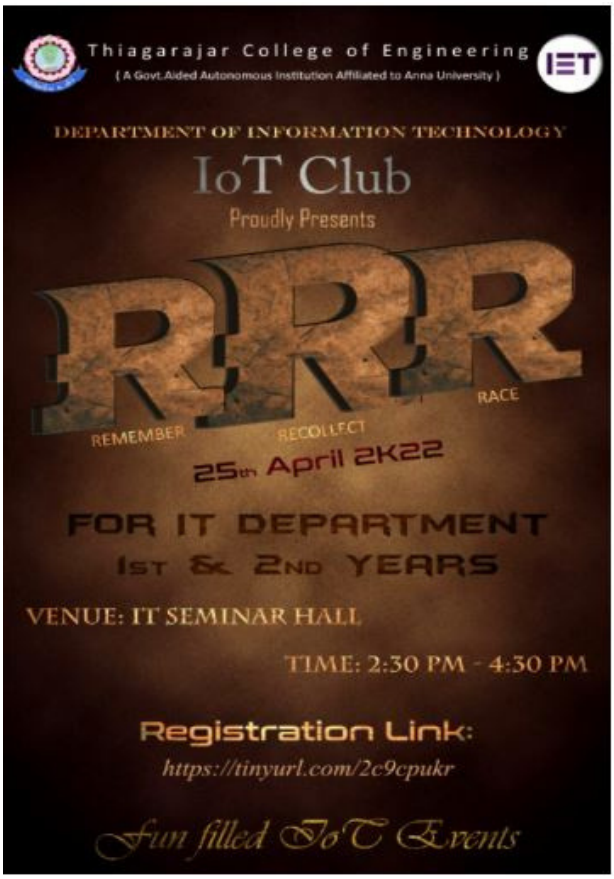
Department Events



IT Association's TECH CONNECTION

IT ASSOCIATION - EXTRAVAGANZA 2022

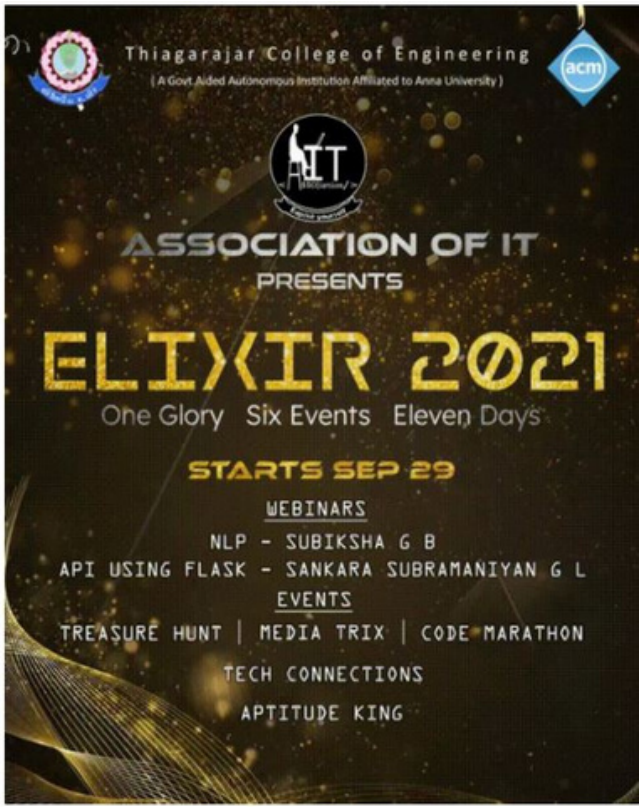




Internet Of Things (IOT) Club RRR

IT ASSOCIATION - TECHNOVA

TCE - IT ACM STUDENT CHAPTER - WEBINAR ON AUDIO SCIENCE & TECHNOLOGY

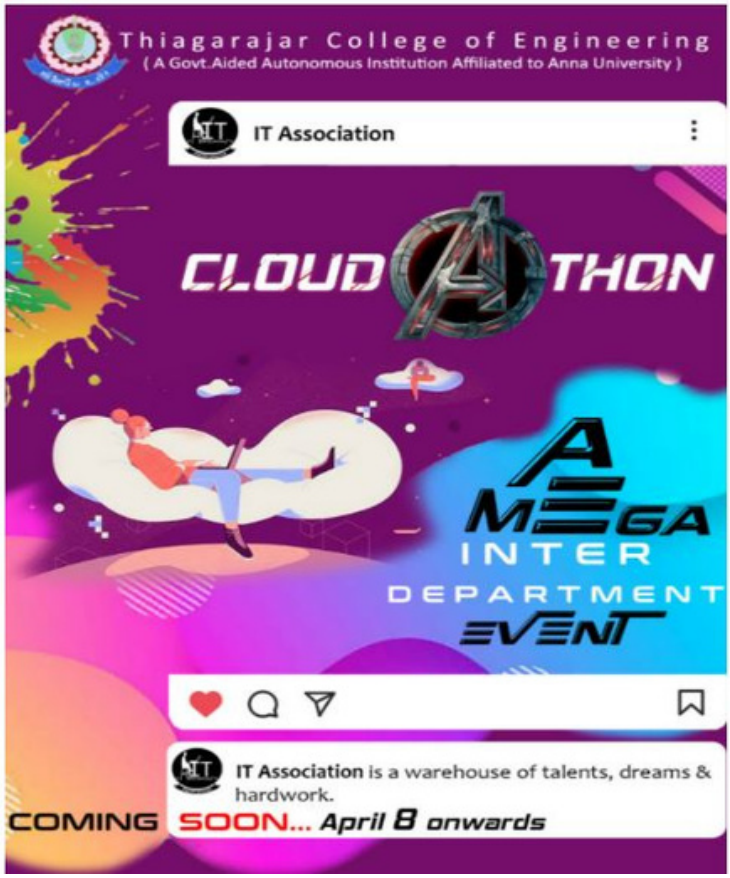


IT ASSOCIATION - ELIXIR 2021

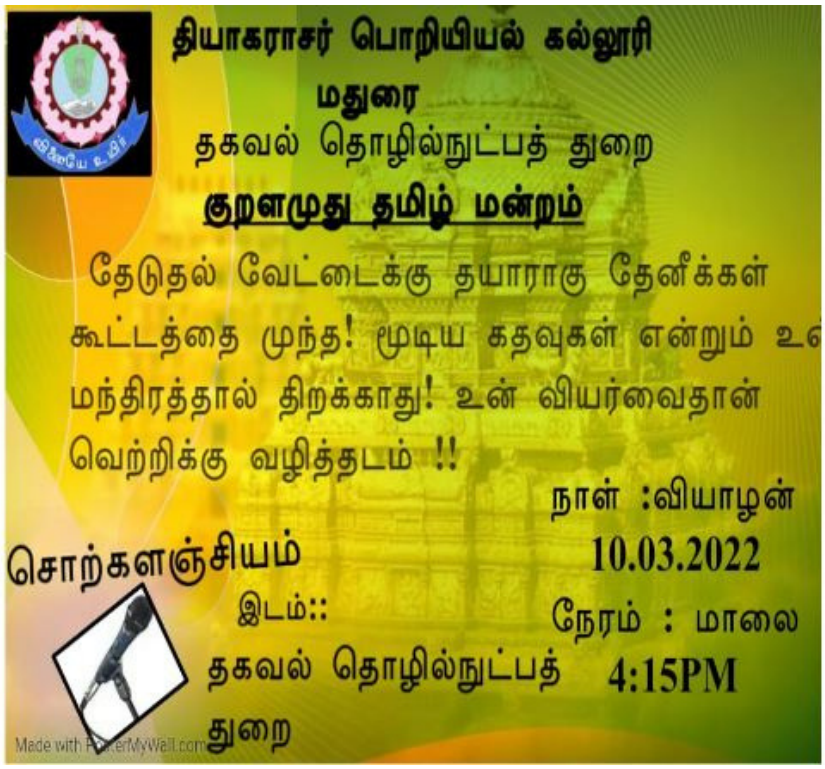
ALUMNI CLUB - MOTIVATIONAL TALK

IT ASSOCIATION - EXTRAVAGANZA 2022

NON-TECHNICAL CLUB EVENTS



IT ASSOCIATION - CLOUDATHON



குறளமுது தமிழ் மன்றம் - சொற்களஞ்சியம்

SPORTS

INTER-DEPARTMENT EVENTS 2022

ATHLETICS 2022

800m (Women's)

Gomathi G 3rd year(IT)

Hammer throw(Women's)

Manisha M 3rd year(IT)

Prijitha S 3rd year(IT)

Hockey - Winners

Kho - Kho - Runners Up

Hand Ball - Runners Up

Kabadi - Runners Up

A special mention to

1.Reshma A - 3rd Year, who stood first in

5k walk

5k run

10k run

1500m

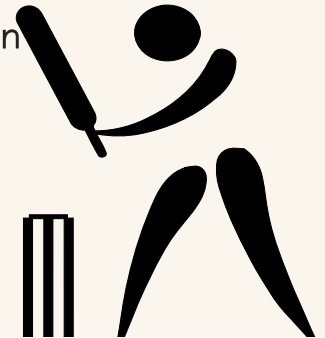
4x100m relay

2.Shyam K - 3rd Year, who stood first in

10k walk

200 m

400 m



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