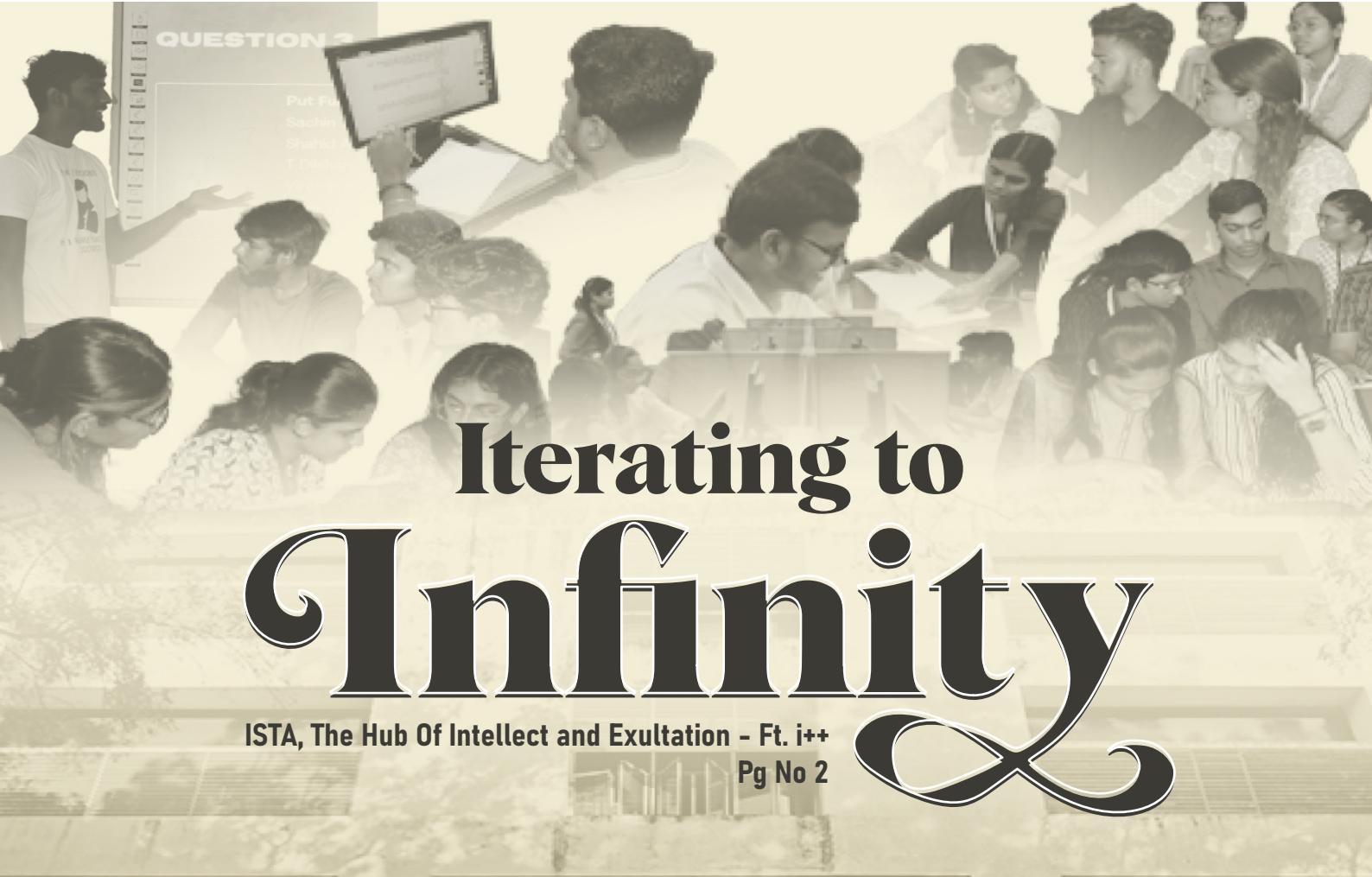




# CACHE



## Iterating to Infinity

ISTA, The Hub Of Intellect and Exultation - Ft. i++  
Pg No 2



DEPARTMENT OF INFORMATION SCIENCE AND TECHNOLOGY



Journey Through Japan : INTERVIEW with Abeyankar Giridharan, Final Year IST Student

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The Freshies' Meet n Greet - Bits N Bytes '23

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A Tireless Strive To Success, Ft. Placements

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# ACKNOWLEDGEMENT

We express our profound gratitude to Dr. S. Swamynathan, the distinguished President of ISTA, Dr. Selvi Ravindran, esteemed Treasurer of ISTA, and for their invaluable support in the compilation of our magazine.

Our heartfelt appreciation extends to Aravind S, Chairperson of ISTA, for his instrumental role in fostering excellence. His contribution and unwavering support has been pivotal to the realization of our magazine's success.

Additionally, our sincere appreciation extends to the erudite professors and students of the Department of IST, who significantly contributed to the creation and refinement of this publication.

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Ramya R [Head]

Ananya K A [Deputy Head]

Shanjanaa G [Deputy Head]

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- 2) Gowthami K-2nd year
- 3) Kiruthiga j-2nd year
- 4) Siva Sowmya S-2nd year
- 5) Salai Kowshikan - 2nd Year
- 6) Soham J - 2nd Year
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# VISION OF THE DEPARTMENT

To educate students with conceptual knowledge and technical skills in the field of Information Technology with moral and ethical values to achieve excellence in academic, industry and research centric environments.



# MISSION OF THE DEPARTMENT

1. To inculcate in students a firm foundation in theory and practice of IT skills coupled with the thought process for disruptive innovation and research methodologies, to keep pace with emerging technologies.
2. To provide a conducive environment for all academic, administrative, and interdisciplinary research activities using state-of-the-art technologies.
3. To stimulate the growth of graduates and doctorates, who will enter the workforce as productive IT engineers, researchers, and entrepreneurs with necessary soft skills, and continue higher professional education with competence in the global market.
4. To enable seamless collaboration with the IT industry and Government for consultancy and sponsored research.
5. To cater to cross-cultural, multinational, and demographic diversity of students.
6. To educate the students on the social, ethical, and moral values needed to make significant contributions to society.

# PLACEMENT COORDINATOR

- Conducting several technical sessions regarding placements.
- Providing ample resources for preparation.
- Conducting contests and mock interviews to refine their technical skills.

# COURSES

- Assisting students from non-IT/CS backgrounds by dedicating extra time, facilitating their grasp of core concepts.
- Conducting regular classes to assess their progress and understanding.
- Providing abundant resources to enhance their technical knowledge.

# MARKETING

- Promoting the department's events, and initiatives within the college.
- Maintaining a consistent brand image across various communication channels.
- Boost event attendance with coordinated promotional campaigns.

# CHAIRPERSON

- Overall management of all club activities, ensuring smooth and effective execution of plans.
- Delegation of tasks and, fostering coordination among team members to achieve the club's objectives.



# EVENTS

- Organising various events from multiple domains as a part of i++ and ITrix
- Arranging workshops on emerging technologies

# NEWSLETTER

- Releasing signature news from the department
- Drafting the news on a regular basis
- Crafting content for social media

# TREASURER

- Maintain accurate financial records of transactions
- Help create and manage the association's budget, ensuring that it aligns with the department's goals.

# INTERNSHIP COORDINATOR

- Providing materials for preparation.
- Conducting contests to assess themselves.

# FOUR



# AIM

## LETTER

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# INDUSTRY RELATIONS

- Analysing financial statements, drafting MOU's managing contact with donors, partners, media and public.
- Cold calling. Using strong communication skills to bring sponsors and partners for department events

# DESIGN

- Managing all design related works in the club including social media posts, magazines, posters, etc.
- Delegate work and train juniors in the field of design

# WEB-DEV

- Updating department activity details in the website regularly
- Delegation of tasks to juniors, while working on the ISTA website
- Having ISTA website populated with all necessary details for events, during the times of Itrix and I++



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# ABOUT CACHE

Welcome to Cache Magazine, your go-to destination for a dynamic blend of technology, creativity, and career insights! With a diverse range of sections catering to the curious mind, we pride ourselves on being a multi-faceted platform that encapsulates the essence of the digital age.

At the heart of Cache Magazine lies the fusion of tech-savvy knowledge and innovative thinking. We have got a lot of tech articles lined up for the readers.

But Cache Magazine isn't just about the technicalities; it's also about the people who make the tech world come alive. Our exclusive interviews bring you closer to the experiences and perspectives of individuals shaping tomorrow's innovations. Moving beyond the realms of technology, Cache Magazine celebrates creativity through its various corners. The "Talent Corner" provides a canvas for artistic expressions, featuring captivating artwork, thought-provoking poetry, and other forms of creative genius. For those seeking mental stimulation, our "Puzzle Corner" challenges the mind with brain-teasers, riddles, and puzzles that entertain and stimulate cognitive abilities. Additionally, we embrace the softer side of expression through a collection of captivating poems, offering a moment of tranquility amidst the bustling tech-centric content.



Cache Magazine is more than just a publication; it's a community—a convergence of technology enthusiasts, creative souls, and career-driven individuals. We invite you to immerse yourself in the rich tapestry of knowledge, inspiration, and innovation that defines our pages. Join us on this exhilarating journey where tech meets creativity, and possibilities know no bounds.

# ISTA

## THE HUB OF INTELLECT AND EXULTATION

Ft.   
iterate to infinity



The hallowed halls of our institution recently reverberated with the symphony of intellect and innovation as the IT department proudly hosted the much-anticipated I++ symposium. In the radiant ambiance of our academic institution, the IT department orchestrated the grand spectacle of I++, an intra-college technical symposium that transcended conventional boundaries. The inauguration ceremony set the stage, radiating an aura of enchantment and excitement, drawing together dignitaries, faculty, and eager participants. The ceremony was graced by the presence of dignitaries, including the Head of the Department, Dr. S Sridhar, and the treasurer of ISTA, Dr. Selvi Ravindran. A special mention was made for the president of ISTA, Dr. S. Swamynathan,

whose unwavering support and motivation proved invaluable throughout the journey.

The symposium unfolded into a series of meticulously crafted events, each designed to challenge and showcase the prowess of the brightest minds in the IT domain. Day one dawned with the Hurdle-a-thon, a flagship event that epitomised the prowess of technology enthusiasts. The ambiance reverberated with the rhythmic hum of collaborative problem-solving, all orchestrated seamlessly by the ISTA association. Students, passionately and meticulously managing every facet, delved into complex real-world challenges, showcasing not just technical finesse but also a profound commitment to innovation.

# I++ Symposium

## Unleashing the Techno-Intellectual Odyssey



As the sun rose on day two, the symposium unleashed a flurry of events. From Break The Query, testing database management expertise, to the captivating Escape Room, where teams collaborated to unravel intricate puzzles, the day was a celebration of diverse talents. The labyrinth of coding conundrums, the creative crucible of Webtrix, and the exclusive CodeFresh competition for first-year students added layers to the symphony of intellect. The ISTA association, at the helm of the symposium's organisation, demonstrated exceptional dedication, ensuring each event unfolded with precision.

As the symposium reached its crescendo, a valediction unfolded, marking the culmination of an exhilarating techno-intellectual odyssey. The symphony of keystrokes, the labyrinth of coding conundrums, and the crucible of creativity and logic witnessed during I++ resonated not just as a symposium but as a testament to the commitment to fostering an environment of academic excellence and innovation. As the curtains closed on I++, the legacy of this symposium emerged as a guiding light, shaping the future leaders of the IT landscape.

# *By the Numbers: I++ Symposium 2023*

## *Participants, Event Diversity, and Question Dynamics*

# I++'23

was a tapestry of intellectual prowess and creativity, with a multitude of events designed to challenge, inspire, and showcase the incredible talent within our academic community. The symposium had one hands-on workshop, an inventive hackathon, and ten tech-savvy events. There was an overwhelming response from all four years and many participants flocked to participate in all of the three. The second-year students were inquisitive about the events and had a great opportunity to explore their skills. There was also an exclusive event for the freshers to engage them and delve into diverse realms.

The workshop was organised by CodeStax AI. 'Bridging Platforms: A Comprehensive Cross-Platform Development Workshop' was the title of the workshop and had around 68 participants and was conducted on the first day of the I++'23. The workshop was conducted for students to get introduced to android development using flutter. The workshop kicked off with an insightful exploration of the fundamental concepts behind cross-platform



development, shedding light on the significance of Flutter in this domain. Participants delved into the Flutter framework, gaining hands-on experience in building applications.



Throughout the workshop, experienced instructors from CodeStax AI guided participants through the concepts of Flutter, offering practical insights and tips for efficient cross-platform development. The interactive nature of the workshop encouraged participants to actively engage in coding exercises, ensuring a dynamic learning experience. By the end of the session, participants not only acquired the skills needed to initiate their journey in Android development but also gained valuable insights into the broader realm of cross-platform app creation.



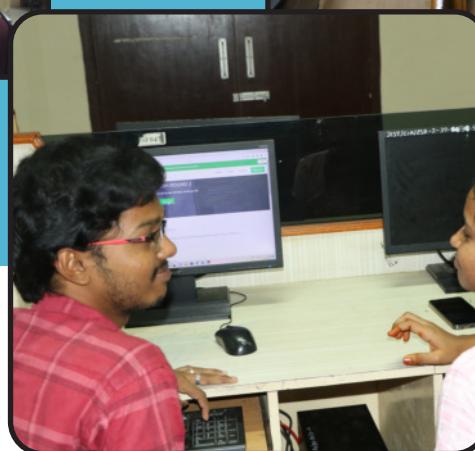
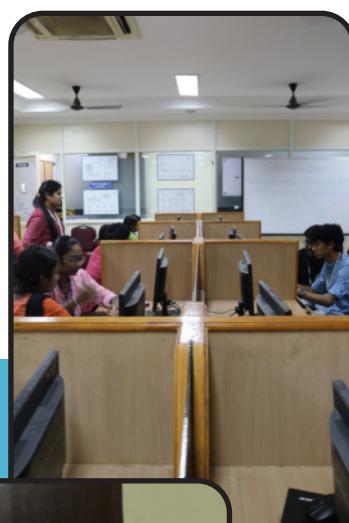
# DAY-1.....

The first day of I++'23 began with the '**Hurdle-a-thon**' where the participants were given problem statements related to various technologies including Arduino. This event helped participants showcase their unparalleled skills, teamwork, and innovative solutions. The hackathon was not just about coding; it was about transforming ideas into impactful solutions that can shape the future of technology.



It had an impressive turnout of around 71 participants and the event judges were impressed with their elegant solutions. The Hurdle-a-thon was followed by the inauguration in the evening where students, staff, respected HOD, and esteemed sponsors came together, marking the commencement of a collaborative journey fueled by innovation and shared enthusiasm.

**'Break The Query'** event involved the active participation of the purple tags who were curious to explore their talent in database management systems which they were learning in the current semester, the event engaged around 57 participants which made it the technical event with the most number of participants after the hackathon.

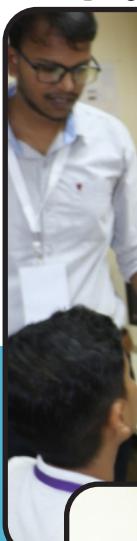


**'Code Fresh'** was an event conducted exclusively for the first-years and had them solve programming problems tailored to their level.



**'Inverse Code'** was a very interesting event that engaged the participants in solving problems by reverse engineering.

There was  
**'Webtrix'**  
showcase developing



# DAY-2

On the 2<sup>nd</sup> day, the ISTA team hosted a total of **Ten Events** from both the tech and the non-tech domains to actively engage the participants.

as a web-designing event titled which made the participants their web-designing skills by g a website from scratch.



CSAU, was a very interesting event where the participants had to solve a tech-related crossword. Participants who made it to the second round had to solve a mystery by solving the coding questions related to data structures and algorithms. The participants found the event thrilling and intriguing.

'Innovate' was a poster making event where participants had to design a poster of a product or company using a chart, newspapers, pen, glue and scissors given to them.



ACM Club teamed up with the ISTA to conduct 'Code Mafia', an event where participants had to solve complex real-world challenges as a team. The participants found innovative solutions and showcased technical and collaborative skills.

'Escape Room' event was where participants worked as a team to decipher a series of intricate puzzles, riddles, and challenges within a set time limit.



A non-technical quiz 'Trivia Quiz' related to movies and series was conducted in collaboration with the Quizzers Anonymous Club. This engaging trivia quiz also included question about culture, history and significant events, testing the depths of participant's expertise.

# Recognizing I++ '23 Sponsors

# CONTRIBUTION THAT COUNTS

In this world of innovation and collaboration, partnerships fuel progress. And as we look back at the profound impact of I++ 2023, it becomes clear that behind the scenes of every groundbreaking moment are the visionary sponsors who have played a primary role in its success.

The symposium was conducted with the generous support of three key sponsors: **Codestax-ai**, **Magoosh**, and **RJK Software Solutions**. Each of these sponsors contributed significantly to the event, both in terms of financial support and valuable expertise.



**Codestax-ai**, a pioneering force in artificial intelligence, showcased unwavering commitment by contributing Rs.15,000 to I++ '23. Their support was instrumental in conducting all the events of the symposium. Beyond this, Codestax-ai also conducted a workshop, "Bridging Platforms: A Comprehensive

Cross-Platform Development Workshop". This insightful session was a highlight of the symposium, providing attendees with an opportunity to delve into the intricate concepts of Flutter, significantly enriching their overall learning experience.

**Magoosh**, a prominent figure in the education industry, played a vital role in fostering learning opportunities at I++'23. Their sponsorship of Rs.10,000 facilitated the implementation of the events, enriching the overall symposium experience. Magoosh hosted an extensive seminar focused on the intricacies of studying abroad. This session explored various aspects, offering insightful discussions on examinations and all relevant considerations related to pursuing education overseas. It provided the students with a walk-through along the path of pursuing education abroad. Exclusively dedicated

to enhancing the educational experience, Magoosh established a specialised help desk for counselling. This proactive initiative aimed to provide personalised guidance and support to attendees, elevating their engagement with the symposium.

Widely recognised for their innovative solutions, **RJK Software Solutions** played a substantial role as a major sponsor, contributing Rs.10,000 in support of I++ '23. This sponsorship was instrumental in facilitating the seamless execution of the symposium.

These sponsors not only invested financially but also brought a wealth of knowledge and industry insight to the symposium. Their dedication emphasises the collaborative essence of I++ '23, propelling advancements and fostering a community dedicated to pushing the frontiers of innovation.



# Wrapping The Splendour Of I++ '23

## The Valedictory Function



The culmination of the intellectual crescendo that was I++ 2023 unfolded with an air of resplendent grandeur on the 17th and 18th of November. The event, akin to a symphony of innovative minds, reached its zenith with an enchanting valedictory ceremony that bestowed due reverence upon the luminaries whose indelible contributions had been etched into the tapestry of this technological spectacle. The stage was graced by the venerable Dr. S Sridhar, the Head of the Department, DIST, and Dr. Selvi Ravindran, the Treasurer, ISTA, both adorned with the mantle of the Guests of Honour.

The epochal celebration of I++ would be incomplete without crowning its jewels: the commendable participants who had embraced the challenges with ardent fervour. The Hurdle-a-thon, an arena where intellect collided with perseverance, crowned three virtuosos who emerged victorious in the face of formidable challenges, each clutching a prize pool of 6000. Meanwhile, the myriad of winners in various tech events basked in a collective pool of 2500, while the champions of non-tech events revealed in the spoils of a 750-prize pool.

As the curtain fell on this commemoration of code and tech, the valediction was not merely a perfunctory closure but a poetic ode to the collective brilliance that had pulsated through the event's veins. The aura of the ceremony was one of retrospective contemplation, meticulously weaving a narrative that traversed

the achievements and endeavours. The guests, spellbound in the regality of the same, exuded an atmosphere of scholarly affluence that resonated with the essence of I++ 2023.

Thus, as the curtains descended on I++ 2023, the legacy of intellectual valour and camaraderie lingered in the air, an indomitable resonance that would echo through the hallowed halls of memory.

# CICADA 3301



## CAN YOU SOLVE THE INTERNET'S GREATEST PUZZLE?

---

Gowthami K

It all started when a post appeared on one of 4chan's boards on January 4, 2012. The user going by the username 3301 signed off the post with a PGP signature, which would later play a crucial role in the series of puzzles and challenges about to unfold. The message read as follows:



Hello, we are looking for highly intelligent individuals. To find them, we have devised a test. There is a message hidden in this image. Find it, and it will lead you on the road to finding us. We look forward to meeting the few that will make it all the way through. Good luck.



And thus began the most extensive scavenger hunt in the history of the internet. Upon examination, it was quickly discerned that the image, when opened with a text editor, could be formatted to reveal a link guiding them to a subreddit with information about a book. Deciphering the clues regarding the book led them to a telephone number that played a pre-recorded message that urged participants to find two additional prime numbers present on the original file, aside from the “3301”, and multiply the three numbers to reveal a link to a website. As the two numbers turned out to be the dimensions of the image, the resulting link took the participants to a website with a countdown and an image of a cicada. Upon the final second, the page disclosed a list of coordinates pointing to 14 locations in 5 different countries.

Meanwhile, some internet users affixed themselves to the intentions of “Cicada” (user 3301). Theories abounded, suggesting a secret society at work, an intelligence agency, and even an international cult. But such were the measures of Cicada that no single clue could be traced back to their identity or online persona. Upon having reached these locations, the participants found posters of cicada with a QR code, which led them to yet another book and a website. But here, Cicada shut down the website after 20 people reached it, asserting: “We want the best, not the followers”. The finalists were explicitly instructed not to collaborate with anyone else and after a month’s silence, Cicada emerged with a message announcing the conclusion of the puzzle.

In common fashion with internet phenomenon, posers bombarded the platform with imitation puzzles; however, the PGP signature by Cicada helped in identifying these imposters. Perhaps this foresight was the reason why the internet broke into a frenzy when precisely a year and a day after the original image was posted, Cicada resurfaced with the valid signature. The second puzzle was not too dissimilar from the first. A recording titled “The Instar Emergence” and an image filled with runic decryptions (although it didn’t contribute to the

puzzle then) were unearthed. 5 finalists from 8 locations in 4 different countries were chosen. However, Cicada merely went silent without any conclusion. Soon arrived 2014 and ushered in round 3 which followed the same course prominently featuring a book called “Liber Primus”, evidently written by Cicada, filled with 74 pages of runic text. The meaning of the images from 2013 unfurled. But this puzzle proved more intricate and 2015 passed with no updates from Cicada’s end. Breaking the silence, Cicada acknowledged that the answer lies within the book. To date, the outcome remains a mystery -- whether individuals actually managed to crack the puzzle and remained quiet or failed in doing so.

The Cicada enigma raises one question in us all: Who is Cicada? The definitive answer eludes us, leading people into speculation, positing the possibility of a government agency recruiting spies, as it was not unheard of, with instances from Google and Microsoft. But in the emails that the finalists received, Cicada described themselves as a group that believes that “Privacy is an inalienable right” and that “Information should be free”. The alleged winners told the media that Cicada belonged to a group of anonymous software developers seeking to develop privacy-conscious applications by recruiting talented individuals via cryptographic puzzles. The recruits were then tasked with developing software that fit the ideology of the group, under the supervision of Cicada. But the recruits lost interest after a while and one by one, all except one, left, and the website was shut down. As of now, Cicada posted their final message in April 2017, cautioning users against misinformation and posers. The status of the third puzzle or the possibility of a fourth one remains unknown, but if you’re someone who shares Cicada’s ideals and wishes to be one of the very few select individuals to revolutionize the tech world, then now’s a better time to brush up those problem-solving skills!

# JOURNEY THROUGH JAPAN

**Exploring the  
Night, Navigating  
Challenges, and  
Embracing Cultural  
Delights with  
Abeyankar**



In the matrix of scholarly eminence and technological finesse, **Abeyankar Giridharan**, a final year IT student from Anna University, emerges as a dynamic melody, seamlessly blending his love for mathematics, sportsmanship, and music into the symphony of his life.

Abeyankar's journey is a crescendo of passion and achievement, with the latest note being his attendance at a prestigious conference in Japan. As a fervent lover of mathematics, he orchestrated his academic path towards the world of Information Technology. However, his composition doesn't end there; he is also an adept sports enthusiast, harmonizing numbers with the rhythm of physical prowess. In the spaces between algorithms and code, you'll find him strumming his guitar, adding musical dimensions to his multifaceted personality.

# THE Q&A

**Q1) How did this resplendent opportunity come to you and what inspired you to avail it?**

The opportunity to attend the conference in Japan was not merely a chance encounter but a harmonious convergence of Abeyankar's aspirations and the avenues provided by the Centre for International Relations and Student Exchange Programs. Encouraged by a friend, he embarked on a journey that would resonate with discovery and cultural exploration.

**Q2) What interesting and exquisite places did you visit in Japan?**

When asked about his experiences, Abeyankar painted vivid landscapes of Tokyo, a city where sophistication meets technology in a mesmerizing dance. Yet, it was in Yokohama that his heart found its rhythm, appreciating the unique coexistence of nature and technology. The beaches and hills served as the backdrop to a harmonious blend of tradition and modernity.

**Q3) Can you give an insight of the work you had done? How did you feel while presenting in such a forum? What was your flow of thoughts during the episode?**

The 10-day program, an intellectual odyssey, commenced with an immersive exploration of Japanese culture and a perceptive study of the corporate juggernauts like Toshiba. The crescendo of this academic symphony unfolded during the final two days, dedicated exclusively to project presentations.

In the crucible of academic competition, six Indian universities along with AU, including the venerable IIT Kanpur and the esteemed VIT, were entrusted with unique themes. AU's theme hallowed into the interesting expanse of finance, with an overarching ambition to unravel solutions to the United Nations' 17 sustainable development goals. The linchpin of their cogitation lay in discerning avenues to bridge the staggering financial gap, a chasm of 2-3 trillion dollars annually from the 5-7 Trillion estimate requirement. A synergistic alliance between AU's Computer Science and Information Technology departments and Yokohama National



University (YNU) yielded a formidable team, pooling expertise from seven diverse majors, including finance and environmental sciences.

The climax of Abeyankar's intellectual sojourn climaxed with a riveting presentation on drought prediction for Tamil Nadu, a magnum opus whose journey continues as his Final Year Project. Impressively, his audience included evaluators from Nomura, a financial mammoth akin to VISA in the United States and India. The final day unfolded as a triumphant display of meticulous research, spotlighting a groundbreaking initiative focused on drought prediction. Abeyankar's unwavering dedication, coupled with the synergy fostered at the Centre for Climate Change and Disaster Management (CCCDM) in Chennai, a bastion boasting a supercomputer, underscored the gravity of his scholarly pursuits, consolidating data spanning from 1985 to 2014.

**Q4) How did you feel while meeting and interacting with the esteemed professors of the field? Did you interact with someone who deeply inspired you in some way?**

Abeyankar's encounter with esteemed professors during this academic sojourn was nothing short of intellectually invigorating. Notably, his interaction with Dr Bishakh Bhattacharya from IIT Kanpur left an indelible mark on his scholarly sensibilities. Dr. Bhattacharya's groundbreaking research on antimatter,

interwoven with its implications for sustainable development, proved both intriguing and fascinating. This fusion of theoretical physics and real-world applicability underscored the interdisciplinary nature of their academic pursuits.

Equally riveting was Abeyankar's dialogue with Dr. Atsushi Suzuki from Yokohama National University. Dr. Suzuki's fervent exploration of Aerogel and Hydrogel technologies transcended the confines of his specific field, revealing a profound commitment to environmental causes.

Despite being in the seasoned cohort above the age of 50, all the exemplary professionals emanated a sincerity and dedication to their work, serving as beacons of inspiration for him. Through these interactions, the luminaries imparted invaluable lessons on the intrinsic value and paramount importance of sustainability in academic and practical realms alike.

WW

#### **Q5) How was the work culture of Japan as you witnessed in Toshiba?**

Abeyankar's immersion into the work culture at Toshiba, a titan in the Japanese corporate landscape, offered a profound glimpse into the ethos that propels the nation's industrial dynamism. The pervasive quality of resilience stood out as a cornerstone of their professional demeanor, proving to be an inspiring force. A testament to their unwavering commitment, Japanese professionals exhibited an admirable practice of tackling challenges head-on, often burning the midnight oil to ensure the completion of tasks. The collective spirit within the workplace was characterized by mutual encouragement and unwavering

optimism, fostering a culture where colleagues cheered each other up and rallied together to surmount obstacles.

A poignant testament to Japan's indomitable spirit unfolded during a visit to the Yokohama Port Museum. There, students were privy to a compelling speech elucidating Japan's triumphant resurgence post wars, nuclear bomb attacks at Hiroshima and Nagasaki and



natural disasters like earthquakes and tsunamis. The resounding message: "Whatever happens, we all rise back the next day!" that echoed through the museum was a vow to rise resiliently, underscoring a collective determination that has become a perennial source of motivation for the Japanese people, a testament to their tenacity and a cultural ethos that transcends adversity.

#### **Q6) What did you learn from your experience there?**

Abeyankar's experience in Japan was a transformative journey, personally and professionally. On a personal level, the sojourn introduced him to a new way of life, fostering independence and honing his skills in effective management. Interacting with diverse individuals provided him with a rich understanding of Japanese culture, broadening his worldview.

Professionally, the exposure to Japan's work culture instilled in him a profound sense of professional behavior. The thought-provoking environment and memorable encounters with accomplished professionals left an indelible mark, enriching his professional acumen and contributing to a set of enduring memories from this enlightening expedition.

### **Q7) What would you call the most fun and amusing part of your journey?**

The most enjoyable part of Abeyankar's trip to Japan was exploring the city at night. Despite the usual early bedtime of the locals, the city came alive in the late hours, creating an exciting experience. On the last day, he and his group ended up back at the hostel by 3 in the morning, adding a fun and spontaneous twist to their journey. Getting lost turned out to be amusing as the locals were incredibly friendly and helpful, even with the language barrier. Additionally, using chopsticks was surprisingly easier than what he had thought. Overall, these late-night adventures, unexpected twists, friendly encounters, and chopstick experiences made his journey both fun and memorable.

### **Q8) What aspect of Japanese culture did you find most interesting during the trip? And what was the most memorable food experience you endeavored ?**

Adapting to Japanese food posed a bit of a challenge for Abeyankar during the trip, but the culinary experience proved to be fascinating. Despite an initial lack of enjoyment with sushi, the presence of good Indian restaurants offered familiar and satisfying options. Notably, he observed the exceptional quality of fruits, vegetables, and food products, with even basic items exhibiting superior quality compared to accustomed standards. Surprisingly, he felt using chopsticks was easier, in contrast to Japanese locals who found it challenging to eat with their hands. This amalgamation of culinary challenges, unique flavors, and a diverse food scene made his exploration of Japanese culture through its cuisine both interesting and memorable.

### **Q9 ) What advice would you like to give your juniors regarding the openings and possibilities in research?**

For the juniors, especially those exploring openings in research, the advice would be to keep an open mind and stay receptive to opportunities that come their way. He suggests seizing as many chances as possible while they're young, utilizing these opportunities to develop and refine their skills. Embracing every opportunity and striving to make the most of them is key, according to him. Additionally, Abeyankar encourages sharing knowledge by teaching others as they progress in their research journey.

### **Q10) How would you compare and contrast the educational prospects of India and Japan?**

From Abeyankar Giridharan's perspective, the educational tapestry in Japan unveils a stress-free ambiance, balancing three hours of class with enjoyable activities. In India, he observes a distinct drive and competence among students, navigating a more rigorous system. These divergent perspectives contribute to the unique richness of global learning experiences.

## **Exclusive Tea From Abeyankar**

The most enjoyable part of Abeyankar's entire trip was getting lost frequently, yet fortunately managing to find the way back to the hostel without much trouble. The locals proved to be very helpful, and despite the language barrier, he managed with the assistance of Google Translate.

On a concluding note, as we delve into Abeyankar's narrative, it becomes clear that life, like music, is a composition of diverse notes. His journey through Japan exemplifies the seamless fusion of passion, opportunity, and exploration—a symphony that resonates with the spirit of a final year IT student, harmonizing dreams and technology on the global stage.

# Next-Gen Connectivity: India's Leap into the 5G Frontier

**Shanjanaa G**

"There's always room for improvement and innovations" is a well known statement in the Techni-verse and has been proved recursively. Once again, reminding the same, the fifth generation of wireless technology has entered the stream.

Launched by the Honourable Prime Minister Narendra Modi at the India Mobile Congress 2022, 1 October 2023 marked the first year of the commercial availability of the 5G services. With just 12 months in action, over 10,000 countries have been covered in 5G networks with both Jio and Airtel as the top providers with 'True 5G' and '5G Plus' networks, respectively.



In Reliance Industries' Q1FY24 presentation, it was reported that Jio has successfully implemented more than 115,000 5G sites and close to 690,000 5G cells across India. The presentation highlighted that the rollout is significantly ahead of plan, and Jio's 5G network currently spans over 90% of census towns. Meanwhile, Airtel's most recent public update on its 5G coverage, as of April, indicated that its 5G Plus network was operational in 3,000 cities and towns.

The central question that emerges is, "What justifies the transition to 5G?". Given that 4G made a significant impact with its impressive speed and accessibility, many individuals questioned the necessity of switching to 5G.

While 4G initiated a revolution by providing affordable connectivity to the masses, it is 5G that propels us into the future. The primary and foremost advantage of 5G lies in its exceptional speeds. While 4G enables high-speed downloads, 5G is expected to elevate these speeds significantly. 5G can deliver anywhere between 10Gbps speeds going all the way to 20Gbps speeds in ideal conditions, making it at least 10 times faster than 4G network. Another benefit of 5G is its capacity to support a significantly larger concentration of mobile phones in a confined area.

5G works similarly to 4G in its functionality, but due to its utilization of a wider range of frequencies, it is less prone to congestion compared to traditional networks. Further, its applications do not stop with just mobile phones, it expands to IoT (Internet of Things) as well, enabling the use of 5G in remotely monitored security cameras, electricity metres, water metres, traffic signals, lights, unmanned irrigation projects, medical applications, and more.

## Massive MIMO

5G utilizes advanced antenna technologies like Massive MIMO (Multiple Input Multiple Output), which involves using a large number of antennas at both the transmitter and receiver. This enhances data throughput and improves overall network efficiency.

## Beamforming

5G networks implement beamforming, directing the signal specifically toward the device rather than broadcasting it in all directions. This targeted approach improves the efficiency of data transmission, leading to increased speeds.

# How did 5G attain such remarkable advancements?

## Low Latency

Compared to previous generations, 5G networks feature markedly reduced latency. This minimized latency ensures quicker response times, making applications more responsive and enhancing overall speed.

## Network Slicing

5G introduces the concept of network slicing, enabling the creation of virtualized, independent networks customized for specific applications or services. This ensures optimized performance and speeds tailored to various use cases.

## Dynamic Spectrum Sharing

Dynamic Spectrum Sharing is a feature of 5G that enables the dynamic allocation and sharing of spectrum resources based on demand. This flexibility optimizes network efficiency and ensures the maintenance of high speeds, particularly in densely populated areas.

In combination, these advancements contribute to the substantial increase in data speeds that 5G networks offer compared to previous generations.

In conclusion, the advent of 5G technology in India marks a transformative leap into a future defined by unprecedented connectivity and innovation. The superior speeds, low latency, and expansive coverage of 5G pave the way for a pool of applications, from enhancing mobile broadband experiences to powering critical communications and fostering the growth of IoT. As India embraces this cutting-edge technology, it opens avenues for innovation, shaping a future where connectivity is not only faster but also remarkably versatile. But as they say, there's always room for continued progress and limitless possibilities in this dynamic landscape of technological evolution. With the daily dose of advancements, in no time we will break all the constraints and bring out an even more fascinating network to the table.

# The Freshies' Meet n Greet

# Bits N Bytes '23

**Srishti Gulecha R**

Each year, an inclusive Induction Programme is conducted to warmly welcome and acclimate first-year students to our college community. Over 10 days, they engage in diverse activities - from creative arts to yoga and sports, fostering a holistic introduction to their new academic journey. The department activities were scheduled from 30th August to 1st September for an hour daily from 2:15 pm. As a part of this, Bits and Bytes was organized by ISTA.

Three days of various events were organized. The majority of the activities were team-based, which encouraged students to engage and socialize. The activities were designed to provide them with enjoyment while imparting new knowledge. The venue for the events was the Ada Lovelace Auditorium.

On day 1 of Bits and Bytes, on 30th August, Professor Dr. Vani K, Professor Dr. Swamynathan S, and Assistant Professor Dr. Selvi Ravindran addressed the students. Following this, the event Mix and Match, captivated students, challenging them to connect puzzles and clues to unveil the correct word. Day 2 featured entertaining activities, including Find the Imposter and Dumb Charades, providing first-year students with enjoyable engagement. On September 1st, the Jeopardy event presented students with questions spanning various topics. Success hinged on making strategic bids and fostering teamwork.

Enthusiastic participation from first-year students marked each event with vigor and zeal. Both students and volunteers demonstrated active involvement, contributing to the seamless execution of the entire program. Heartfelt thanks to the spirited engagement of our first-year participants and dedicated volunteers.

ISTA takes immense joy in expressing gratitude to the dedicated volunteers who meticulously planned these events. We wish all the first-year students a thrilling adventure through college. Embrace challenges, seize opportunities, and make your college life truly remarkable!

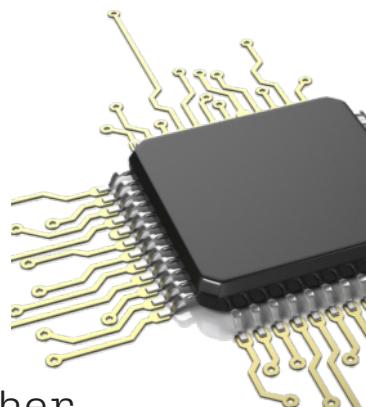
# *The Symphony of Code and Steel*

In the realm of software, where algorithms dance,  
In the silence of the lines, where the codes enhance,  
    In all the languages, do you reveal,  
A tapestry of logic, where complexities unveil.

*In the realm of hardware,  
Where wires cut across circuits.  
Amidst the chips and cables, beware  
Of human innovation pursuits.*

In the fine prints of code, where glitches are met,  
No matter the frustration, we always restart.  
Coz all that matters is the user's joy, when they get,  
The interface we made to reach their heart.  
The symphony of code and steel

*From the hum of processors,  
To the pulsing of transistors  
Steel paints the canvas that gleam,  
To mark the digital dream.*



When bits and bytes weave tales,  
And zeroes and ones string them together,  
The cacophony of the machine blares,  
Nurturing our dreams further!

# PUZZLE CORNER

*Decipher It*



HOW

f xnsljqj-yfxpnsl xdxijr hfs tsqd wzs tsj uwtlwfr fy f ynrj

↓ -5

a single-tasking system can only run one program at a time

1. ufailcnbgm uly omyx um mjywczcwuncihm zil jylzilgcha wufwofuncihm uhx xunu jliwymmcha
2. e ycu crrnkgf vq tg-korngogpvkpi vjg mgtpgn qh vjg Wpkz qrgrtcvkpi uaugvo
3. aol dhalymhss tvklz dhz aol mpyza wyvjllz tvklz av il puayvkbjlk
4. zwpw opnqypqna eo w swu pk opkna wjz kncwjeba zwpw ok pdwp ep ywj xa qoaz abbeyeajphu
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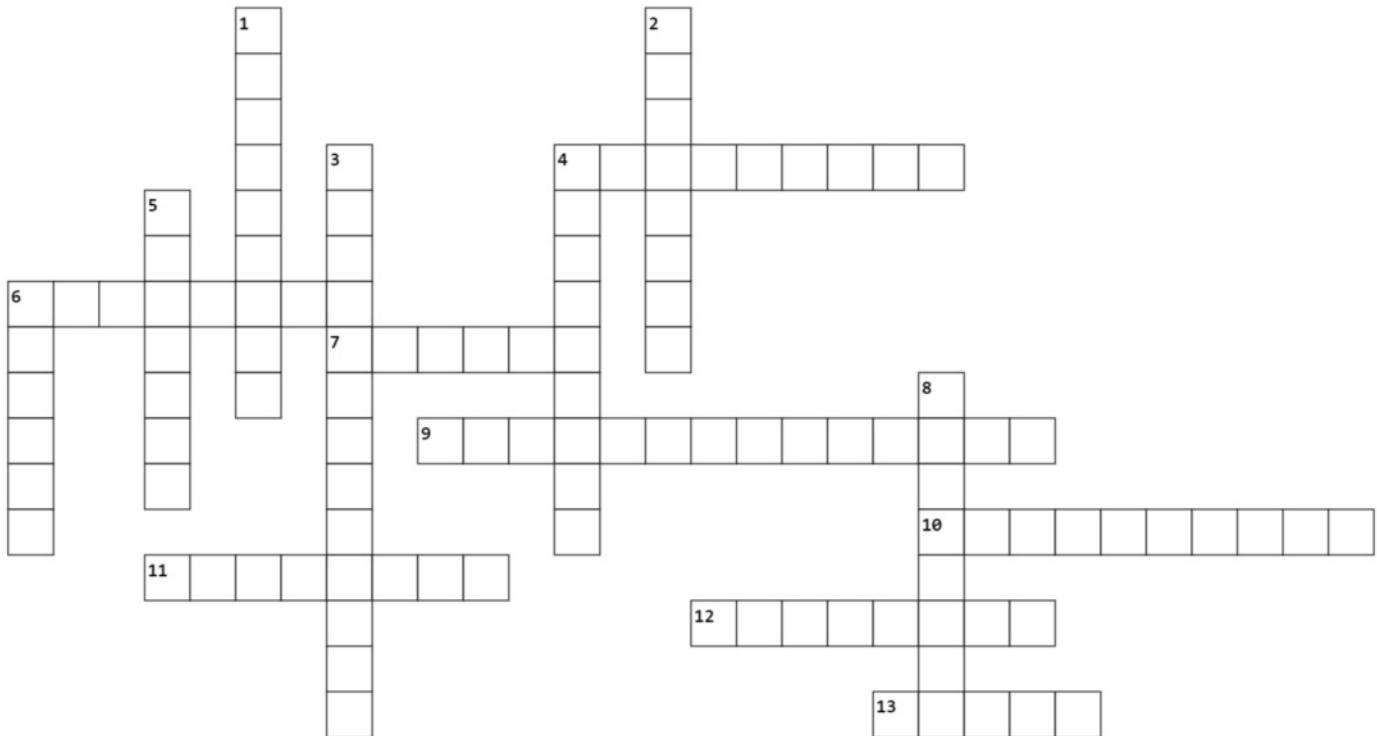
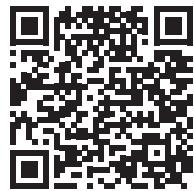
## CACHES'S CODE CHASE

Embark on a cosmic coding journey with two stellar challenges! In “Cosmic Spaceship Allocation,” optimize the distribution of spaceship toys to make alien children content. Then, in “Poisoned Pages,” calculate the total seconds Ashe is poisoned by Tom’s magical attacks. Join the fun – code your way through the cosmos!



Scan the QR code for an intergalactic coding experience on HackerRank!

# Cross It Out



## Across

4. The systematic analysis of data to gain insights and make informed decisions.
6. Programs and instructions that control the operation of a computer system.
7. A device that directs data traffic between computer networks.
9. The creation of a virtual version of a resource, such as an operating system or server.
10. The process of converting information into a code to secure it from unauthorized access.
11. A global network connecting millions of computers, making information and resources accessible.
12. Physical components of a computer system, such as the central processing unit and peripherals.
13. A network of remote servers used to store and manage data, accessible via the internet.

## Down

1. The point of interaction between a user and a computer system or device.
2. A structured collection of data, often stored and managed electronically.
3. Measures taken to protect computer systems and data from unauthorized access or attacks.
4. A step-by-step procedure for solving a problem, often used in programming.
5. A system of interconnected computers and devices that communicate with each other.
6. A computer or system that manages network resources and provides services to other computers.
8. A barrier designed to prevent unauthorized access to or from a private network.

# COMPUTERARIA

## Salai Kowshikan

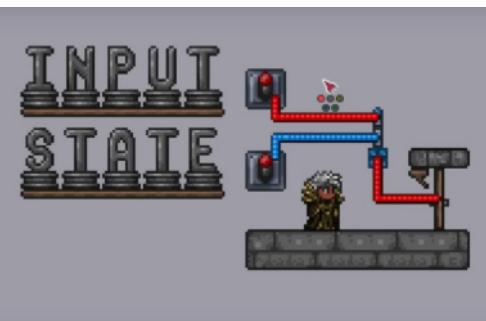


computer running inside Terraria capable of running RUST code. He demonstrates this by running pong, Conway's game of life, and even 3D rendered environments.

## Wiring systems in Terraria

The wiring mechanism consists of two elements - wires and switches. When switched on, the switch sends a signal through the wire and toggles whatever is present at the end of the wire. This system allows the players to open doors or turn lamps with the flick of the switch.

The logic gate made by Xander consists of two switches - INPUT and STATE. The INPUT signals are passed to the output only if the STATE switch is also ON. So, if the STATE is off, the output is 0 irrespective of the INPUT signal. This is technically the working of an AND gate.



“What if I made a video game to simulate the working of the computer and use that to run a game inside a game?”

That's what Xander Naumenko, an Engineering physics student at the University of British Columbia thought of when he was playing Terraria. Terraria is a 2D sandbox game where the players can explore, build, craft, and survive in a procedurally generated world. It was developed by Re-Logic and released for Windows in 2011. Xander spent over 600 hours making the “Computeraria” - a fully functional general-purpose 32-bit

However, the number of STATE switches you can include is not limited to one. Further, each of these STATE switches can be controlled by other INPUT and STATE switches. Just like real computers, Computeraria is built upon the combination of these two switches.



a lot when compared to RISC-V's mere 47 instructions containing only simple instructions that are achievable in one CPU cycle allows RISC to be more efficient in terms of power and memory usage. Computeraria emulates the RISC-V rv32i (a 32-bit Base integer instruction set) using the wiring system of Terraria. The currently available version of Computeraria can achieve a clock speed of 5000 instructions per second with 96 KB of RAM available to perform.

## WireHead

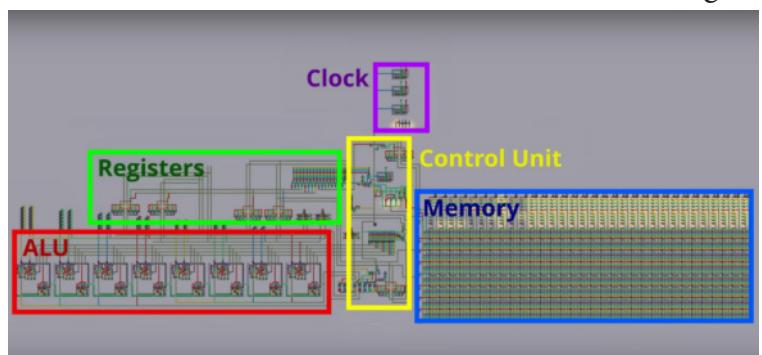
The first implementation of Computeraria was too slow, running at 0.1Hz. It was because when a switch is triggered, the game checks for the surrounding four tiles to locate the wire with the same shade of color and moves to the tile. The game then again repeats this process to find the next tile to move the signal. This slow traversal results in linear complexity  $O(n)$  which is too slow for the huge scale of the project. Xander was able to overcome this by rewriting the entire implementation of wiring in the game's code with his mod called the WireHead which accelerates the wiring system with the help of group caching.

## Group caching:

With the vanilla algorithm, it will take  $O(n)$  time to toggle the output where  $n$  is the length of the wire each time a bit is needed to be transmitted. This can be improved by precomputing all the wire connections and all the mechanisms attached to them and caching them into a two-dimensional array. To begin, each group of wires (wires with the same color code and all the output

## RISC-V Instruction Set

RISC-V stands for Reduced Instruction Set Computer - Five which is an open-source instruction set developed as an alternative to proprietary instruction sets such as Intel's x86 (80x86). The current x86 design contains a total of 3,684 instruction varieties, which is



mechanisms attached to it) has its two-dimensional array initialized with the size of the world. The mod loops over each tile of the world and if any group which hasn't been cached yet is encountered, a recursive depth-first search is performed to mark all the tiles that are part of the current group. This way, when a switch is pressed the computer can simply look at the groups to which the switch belongs and toggle all the output tiles of the group. This pre-run at usable speeds.

## Everything is born from stupid ideas

Innovation is born when you venture into even the stupidest little ideas that sprout from your mind. So, don't hesitate to pick up even the smallest of project ideas that come into your mind ;) Who knows what it could grow into in the future?

## RESOURCES USED

Computeraria [ <https://github.com/misprit7/computerraria> ]

WireHead [ <https://github.com/misprit7/WireHead> ]

YouTube Video Demo [ <https://www.youtube.com/watch?v=zXPiQk0-zDY> ]

Reddit Discussion [ [https://www.reddit.com/r/rust/comments/14id632/i\\_made\\_a\\_riscv\\_computer\\_inside\\_terraria\\_that\\_runs/](https://www.reddit.com/r/rust/comments/14id632/i_made_a_riscv_computer_inside_terraria_that_runs/) ]

# A Tireless Strive

1

## Aptitude Round

Quantitative Aptitude, Logical reasoning, and Verbal ability are the topics tested in this round. Consistent practice of these sections from popular websites like IndiaBix, PrepInsta can aid your preparation. Practicing mock tests can help you do these sections within the stipulated time. To enhance verbal ability, reading can help. Get into the habit of reading newspapers and books for at least 15 minutes. Try doing mental maths every time you get an opportunity, to stay strong in your fundamental calculations.

2

## Group Discussion

Group Discussion (GD) is where, companies test the candidate's confidence and their ability to interact with others in a group. Build your confidence through mock GD practices. Be prepared with topics from various fields - economics, management, environment, socio-cultural issues, etc. Read more about various issues and current affairs to gather knowledge. Practice GD topics given by the companies in previous years. Presentation is very important and we can master this skill only with practice.

3

Coding is the most important phase of the placement process. It is given maximum weightage by most IT companies. Practice coding right from the start, coding just a few months before placement may not be that helpful. Code consistently from popular websites like LeetCode, CodeChef, Hackerrank, GeeksForGeeks etc. Begin with easy-level questions first and proceed to medium-level questions. Doing hard-level questions at the start may make us demotivated, if we are not able to solve those questions. Choose one language that you are familiar with and practice in that and learn all the in-built functions in that language. You

## Coding / Online

can choose C++, Java , Know STL for C++, Java improve your coding. By data structures(Linked and then proceed to BST, Greedy, BackTr dynamic programming.

Practice the frequent and previous year coding companies. Attempt more challenges to improve your skills. For coding practice an important part is consistency in coding never give up. That's so that you get to know

## ISTA's Role in Facilitating Students' Success

The ista's placement and internship coordinators are taking great efforts to help the orange and purple tags with their placement and internship preparation.

Students are currently grouped into teams, each comprising 5-6 members and supported by 1-2 mentors. These mentors are actively guiding the students through their preparation, offering insights into platforms, interview strategies, and vital placement information by providing various preparation materials. Once these topics have been practiced, programming contests are conducted. Engaging in competitive programming contests is proving pivotal for the students, enhancing their problem-solving abilities, honing coding skills, and fostering expertise in algorithms and data structures.

Additionally, this experience is currently cultivating resilience among the students, enabling them to tackle challenges and solve problems effectively under pressure. In the ongoing preparation sessions, the curriculum has comprehensively covered essential topics such as Basic Maths, SQL, sorting, and arrays for students gearing up for placements. Simultaneously, participants in the internship training program have been provided with focused instruction on Basic Maths and Arrays, ensuring a well-rounded and tailored approach to their learning experience. Three programming contests have been successfully conducted, with separate editions tailored for placement and internship trainees. These contests garnered significant participation, showcasing a positive response from a diverse group of students.

# To Success Ft. Placements



4

## Technical Interview

In the technical round, the interviewer asks us to code the questions and explain the logic behind them. For these, we need to know the different approaches to solve a problem and also know the time complexity of the problem using the various approaches. Know the various sorting techniques and basic algorithms for arrays like Kadane's algorithm, binary search algorithm, etc. Stay confident throughout the interview, this gives a good impression to the interviewer. Some interviewers also test us with logical puzzles and they ask us the approach to solve it. The computer fundamentals and core subjects are also tested by the interviewer. Before the interview go through all the previous year's interview experiences for the company. Also, gather all the information about the company through their Pre Placement Talk (PPT) or from their websites. Attend mock interviews if possible.

## e Test Round

Python or JavaScript. Java arraylists, vectors to be familiar with all the (List, Stacks, Queues), topics like binary trees,acking, Graphs, and

ntly asked questions, ng questions from the ck contests and coding our time management eparation, the most sistent coding. Keep Try to do pair coding w other techniques to

solve the same problem. You can also debug others' code and improve your coding. Never get demotivated when you are not able to solve a question, see the approach and solve the question the next day. Keep coding consistently and solve atleast two coding questions every day.

Technical MCQs are also often asked with the coding round. These MCQs are from core subjects like Operating Systems(OS), Database Management Systems(DBMS), and Computer Networks(CN). For this section prepare from your class notes and standard textbooks. Take notes, keep updating and revising these topics and stay strong in these fundamentals.

5

## HR Interview

This is one of the easiest stages in the placement process. Here they test only the confidence of the candidate through various HR questions. These questions include situation-based questions, like how we react given a situation to assess our behavior. Practice these HR questions beforehand from various websites.

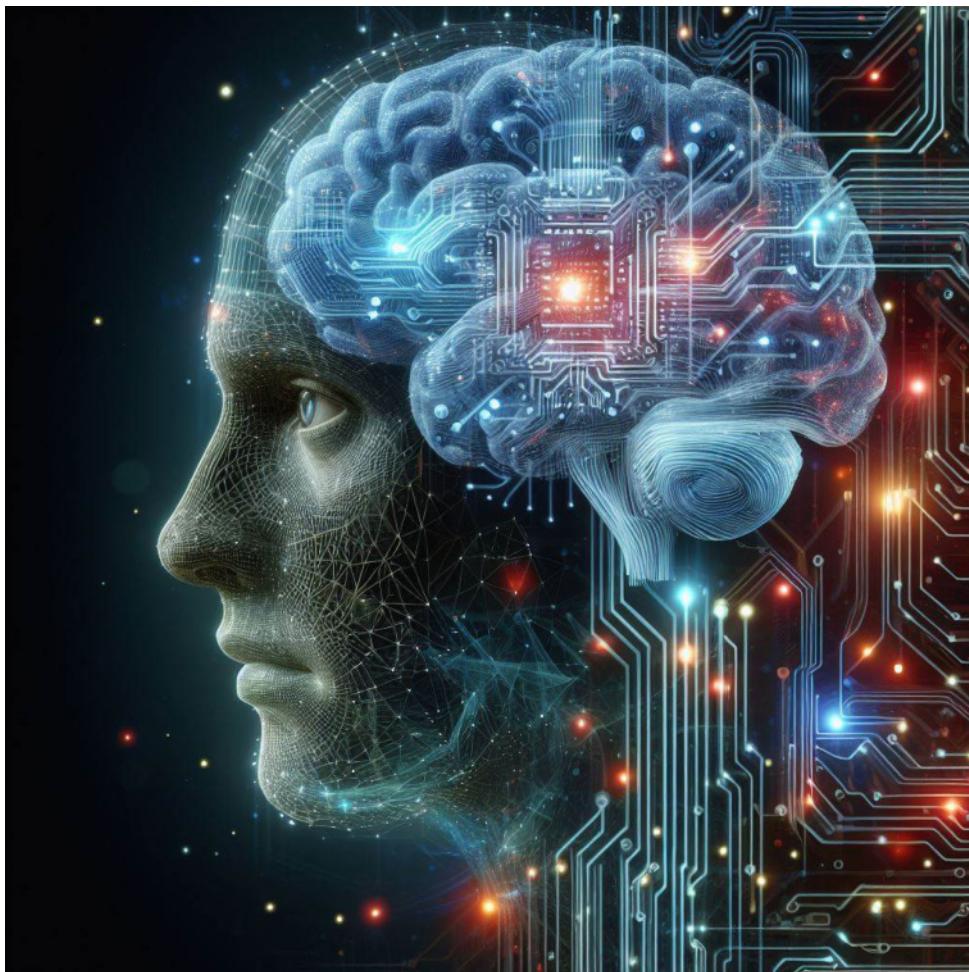
# Student Placement & Internships

of enthusiastic participants.

A set of 133 second-year students actively participates in the internship preparation program, while 65 third-year students are dedicatedly engaged in their preparation for placements. Additionally, approximately 30 final-year students have assumed mentorship roles, extending guidance to both second and third-year students. These mentors contribute by providing relevant materials and conducting sessions to address doubts, creating a supportive learning environment. Furthermore, some third-year students have taken the initiative to mentor their second-year juniors, particularly focusing on guiding them through their internship preparation journey.

In addition to these efforts, the heads of the courses are actively involved in supporting students from non-IT/CS backgrounds. They conduct sessions beyond regular class hours to ensure a thorough understanding of core concepts in the syllabus. Moreover, the course heads are generously providing ample resources to facilitate comprehensive preparation for these students.

Coming to the conclusion, keep practicing from the start and maintain consistency from the start. Never get demotivated if you are not able to succeed at the start, hard work always pays. Work hard, code hard and you will definitely get placed in your dream company.



# Merging Minds and Machines

## The Neurotech Revolution Unveiled

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*Ramya*

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### Diving Into Neurotechnology and Brain-Computer Interfaces

In a laboratory pulsating with the hum of innovation, a scientist dons a headset, connecting mind to machine. The room holds its breath as a prosthetic hand twitches to life, responding to the intricate dance of neurons. This isn't science fiction; it's the dawn of Neurotechnology and Brain-Computer Interfaces. Join us on a journey into the synapses, where minds and machines converge, unlocking a future where thoughts shape reality.

In the pulsating heartbeat of technological evolution, a riveting tale unfolds — the story of minds and machines merging in a dance of innovation. Picture this: a paraplegic artist, once confined by the limits of their own body, now effortlessly creating masterpieces through the sheer power of thought. Welcome to the realm of Neurotechnology and Brain-Computer Interfaces, where science fiction meets reality, and the extraordinary becomes the new norm.

In the intricate realm where human cognition intertwines with cutting-edge technology, a revolution is unfolding — Neurotechnology and Brain-Computer Interfaces (BCIs) are transcending the boundaries of imagination and propelling us into a future where the mind and machine harmoniously converge.

## **Unlocking the Brain's Secrets: A Prelude to BCIs**

The brain, an enigmatic labyrinth of neurons, synapses, and electrical impulses, has long fascinated scientists and technologists alike. Neurotechnology represents the culmination of decades of research, unlocking the brain's secrets and paving the way for revolutionary applications. At its forefront stands Brain-Computer Interfaces, a marvel of innovation that promises to redefine the way we interact with machines.

## **The Symphony of Neurons: Understanding BCIs**

BCIs are intricate systems designed to establish a direct communication link between the brain and external devices. This is achieved by decoding the brain's electrical signals, translating intentions into actionable commands. Electroencephalography (EEG), one of the primary technologies in BCIs, captures the brain's electrical activity with unprecedented precision.

## **Applications Beyond Imagination**

The potential applications of BCIs are as vast as the neural networks they interface with. In healthcare, BCIs offer hope for those with paralysis, enabling them to control

prosthetic limbs or communicate with the external world. Beyond healthcare, the gaming industry is exploring BCIs to create immersive experiences that respond to the player's thoughts and emotions.

## **Mind-Machine Fusion in Real Time**

Imagine controlling devices with a mere thought — the essence of BCIs lies in their ability to translate intention into action seamlessly. Whether it's typing on a virtual keyboard or maneuvering a drone through the power of thought, BCIs are catapulting us into a realm where the boundary between mind and machine blurs.

## **Challenges on the Neurotech Horizon**

However, the journey towards mind-machine fusion is not without challenges. Ensuring the security and privacy of neural data, refining the accuracy of signal decoding, and addressing ethical considerations are critical facets that demand meticulous attention. The potential benefits, however, far outweigh the challenges, sparking a fervor among researchers and technologists to overcome these hurdles.

## **Neuroethics: Navigating the Moral Landscape**

As BCIs inch closer to becoming an integral part of our lives, the ethical dimensions of neurotechnology come to the forefront. Questions about consent, cognitive enhancement, and the potential misuse of neural data beckon us to tread carefully. The ethical exploration of this frontier is as crucial as the technological advancements themselves.

## **The Road Ahead: Neurotech's Promise**

In the not-so-distant future, neurotechnology and BCIs hold the promise of revolutionizing education, communication, and even the very fabric of human experience. As we stand on the precipice of this unprecedented era, the fusion of minds and machines beckons us to dream beyond the confines of the present.

In conclusion, Neurotechnology and Brain-Computer Interfaces are not just technological advancements; they represent a profound evolution in our understanding of the human mind and its interface with the digital world. The symbiosis of these two realms has the potential to reshape the landscape of human experience, heralding an era where thoughts seamlessly translate into actions, unlocking possibilities limited only by the boundless expanse of the human imagination.

# DIGITAL ART: WHERE ART MEETS TECHNOLOGY

-SOHAM J

Hey there, fellow students! Let's take a break from those textbooks that feel as heavy as a sumo wrestler and embark on a journey into the whimsical world where technology and art magically combine to bring us the enchanting universe of anime.

with its flashy moves and buckle up because we're delightful dance between the spectacular magic of need to have a Ph.D. in technology "nerd"; it's about being part of some-industry, worth more than a magi-all thanks to the love affair

Imagine yourself as an anime ture by sketching out those hero's epic punch, the unexpected us all saying, sketches are like we all crave. But deserves a special spot-

Naruto, our beloved ninja hero, the anime world, and it's a whirl-Rasengan is like the superhero It's that move you can't help but room, hoping to harness its power. involves spinning chakra into a spin-punch like no other. And how is it through the magic of digital animation.

With software like Toon Boom Harmony que transformation, frame by frame, the edge of our seats. And when it comes to making sure every spin and explosion is as

Now, let's talk 3D magic – where gigantic with destruction. Ever wondered how "Attack lifelike? The secret? Digital artists use software characters, mecha, and those colossal titans them-software like Adobe After Effects or Nuke

Special effects are where the party gets wild – think fireballs, magic spells, and all that sizzle jazz. Imagine being the wizard behind the curtain, conjuring fiery explosions and mystical spells. This is where the real fun begins. With tools like Adobe After Effects or Blender, you're the master chef adding the extra spice to the narrative, leaving everyone's jaws dropping faster than a microwave burrito.

Have you ever wondered how anime keeps us glued to the screen characters with eyes bigger than our dreams? Well, going on a rollercoaster ride to uncover the tech and art that transforms mere doodles into anime. But here's the scoop – you don't to join this party. It's not about being a thing truly enchanting. The global anime cian's hat full of rabbits, keeps on growing, between technology and creativity.

artist. You kickstart your artistic adventure heart-pounding moments: the villain's dramatic laugh, or the transformation that leaves "Whaaaaat?" These the recipes for the dishes there's one move that light - Naruto's Rasengan.

brought the Rasengan into wind of awesomeness. The punch of the anime world. imitate in your living This iconic technique ball of energy that packs a life? You guessed it -

or TVPaint, these sketches undergo a Cinderella-es- becoming the dazzling animations that keep us on the Rasengan, the animation team goes all out, electrifying as we imagine.

titans rise from the ground like they've got a hot date on Titan" makes those colossal creatures look so like Blender or Autodesk Maya to create 3D characters. But wait, there's more! Compositing flawlessly fuses these 3D wonders with the 2D



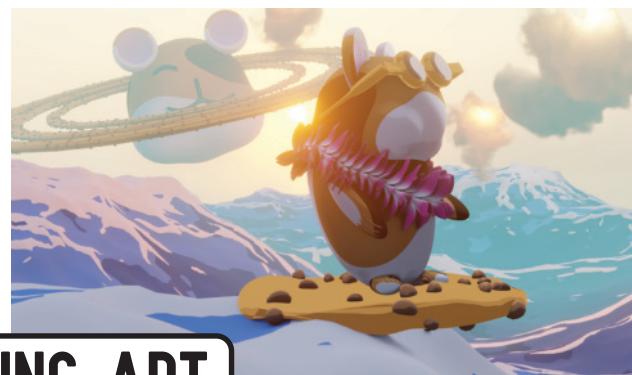


From sketches to masterpieces, digital artists use tools like **C Studio Paint**, **Paint Tool SAI**, or **Adobe Photoshop** to outline and color characters, ensuring they look picture-perfect. Think of it as giving your favorite anime characters a makeover to make them runway-ready.

Now, put on your director's hat – you've got a collection of amazing scenes, and it's time to piece them together. This is where digital editing comes into play, using software like **Adobe Premiere Pro** or **Sony Vegas** to arrange the scenes like a symphony conductor. Compositing software like Adobe After Effects adds the final pizzazz, smoothing out transitions and adding dynamic digital effects that would make a rockstar jealous.

You might be thinking, "Wow, this is some next-level stuff!" And you're right. The anime industry, powered by cutting-edge technology and the limitless creativity of artists, is a dynamic titan in the entertainment world. And the best part? It's not just for "techies"; it's a playground for anyone with a passion for a love of anime.

Before we say adieu, let's take a moment to bask in the delightful marriage of creativity and technology. In a world where technology often feels like it's trapped in a cubicle, the anime industry stands as a shining example of how technology can be as cool as a cucumber. It's a world where your doodles can turn into superheroes, and your imagination can run wild. And speaking of showcasing talent, don't forget to check out our "Cache Magazine," where we celebrate the incredible artwork and stories created by talented individuals just like you. Who knows, your masterpiece could be the next cover feature, turning you into the rockstar of the anime world!!!!!!!!!!!!!!

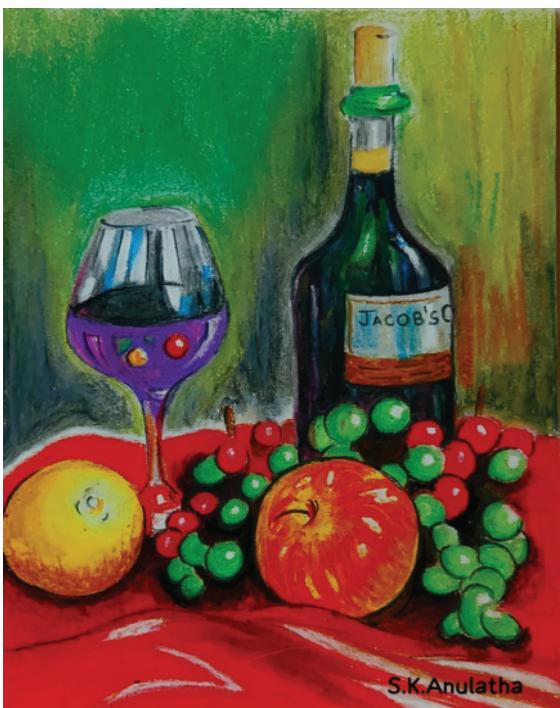


## RENDERING ART

SHASHANK NARAYAN RAMNARENDRA - 2ND YEAR



# TALENT CORNER : ART



ANULATHA S.K  
3RD YEAR



KIRUTHIGA J  
2ND YEAR

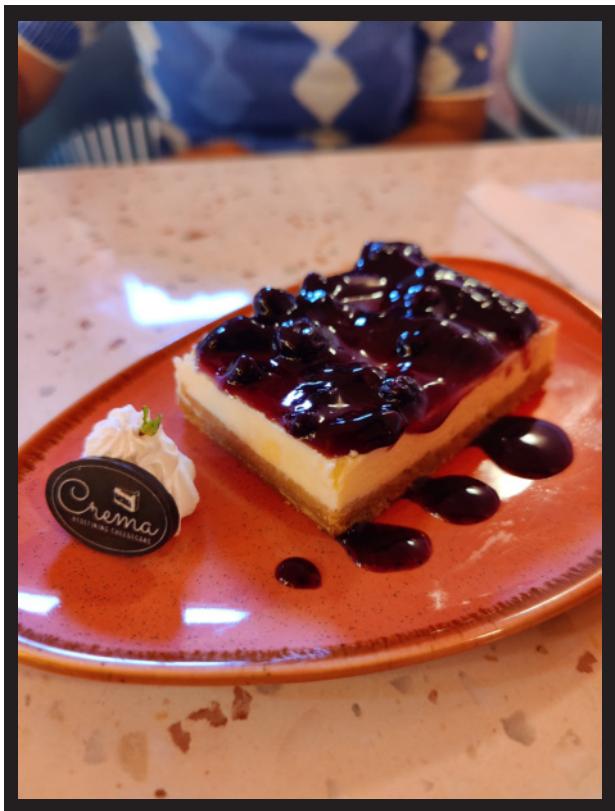


SHANTHA PRIYA M  
3RD YEAR

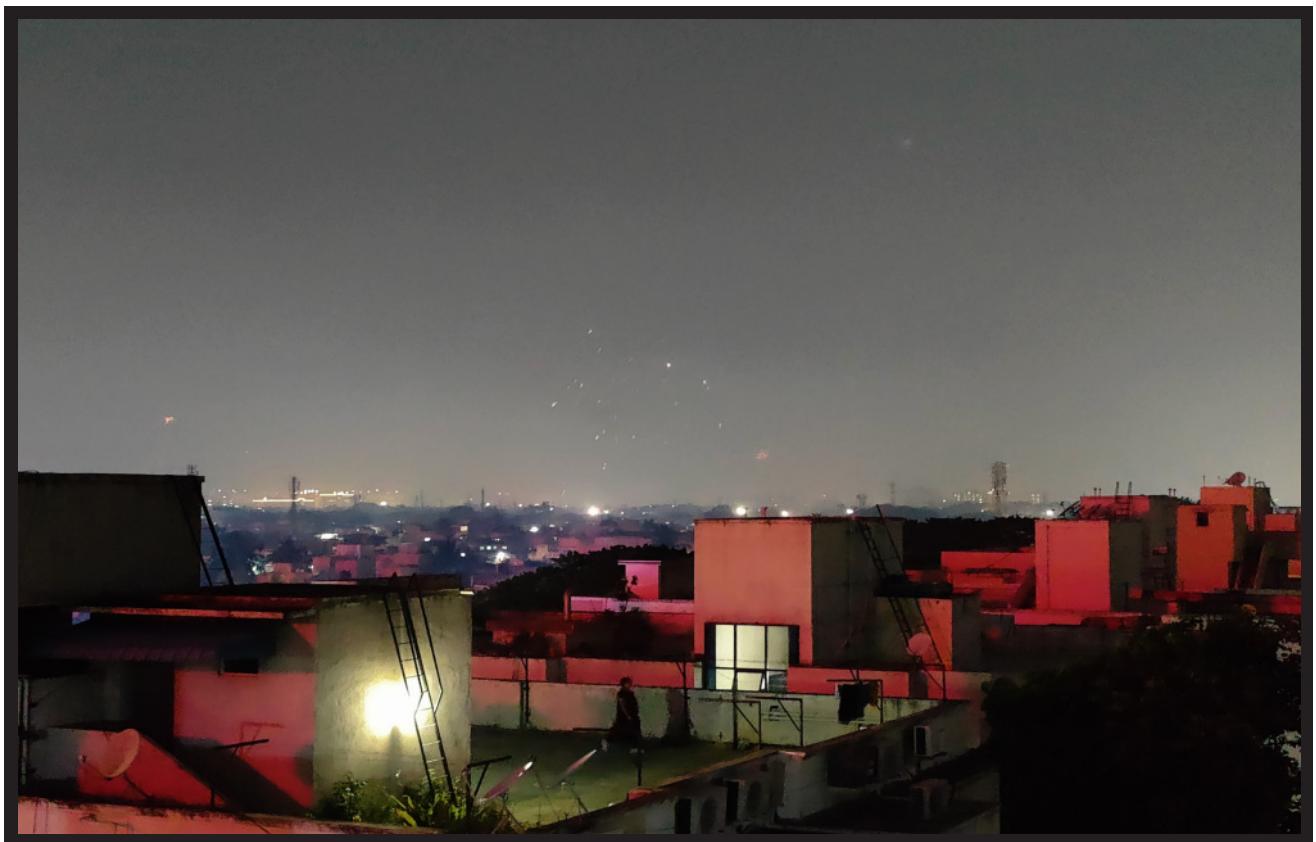


SIVA SOWMYA S  
2ND YEAR

# PHOTOGRAPHY



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# I++ 2023 WINNERS

POSITION	NAME	DEPT	YEAR
<b>HURDLE-A-THON</b>			
1	RAKSHITHA T	IT	2
	VARSHITHA R	IT	2
2	GOPALA KRISHNAN N	IT	2
	ARUN S	IT	2
	JEYABALAN P	IT	2
3	GIRISH SAI D	IT	2
	SIVASANKARAMOORTHY R	IT	2
	GANESH S	IT	2
<b>INVERSE CODE</b>			
1	PRAVEEN M	IT	3
	DEEPAKRAAJ CN	IT	3
2	DHARANIRAJ V M	IT	2
	EZHIL DHIRAVIYA J	IT	
<b>WEBTRIX</b>			
1	SALAI KOWSHIKAN S	IT	2
	ABHARANASHREE M	IT	2
2	SIVA VIGNESH S	IT	4
3	G NARENDRAN	CSE	3
<b>CODE FRESH</b>			
1	SANKARA KRISHNA P	IT	1
	S AKILESWARAN	IT	1
2	PRAVEEN VENKATESH	IT	1
<b>INNOVATE</b>			
1	ARNAUD JOE NIRMAL	IT	2
	AJAY KUMAR	IT	2
2	NITHYASRI S R	IT	3
	DHIVYADHARSHINI S K	IT	3
	LEKHA S	IT	3

POSITION	NAME	DEPT	YEAR
<b>CODING CHRONICLES</b>			
1	KAMALESH N	CSE	2
	NIRANJAN K	CSE	2
2	DEEPAK S	CSE	2
	DAKSHINESH M	CSE	
<b>CODE MAFIA</b>			
1	RAGUL V	CSE	2
	SACHIN ABHINAV	CSE	2
2	PRASANNA KUMAR R	CSE	2
	S K RITHESH KUMAR R	CSE	2
3	RAGUL S	CSE	3
	PRADEEP S	CSE	3
<b>SCAN AND SEEK</b>			
1	M S LOGESH	IT	2
	STEPHEN T	IT	2
	PRAMOTH KUMAR	IT	2
2	MADHAN D	IT	2
	ARUN KATHICK	IT	2
	NEELAKANDAN S	IT	2
<b>ESCAPE ROOM</b>			
1	SHANJANAA G	IT	3
	SUBASHREE S R	IT	3
2	ABIRAMI S V	IT	3
	SABITHA S	IT	3
<b>TRIVIA QUIZ</b>			
1	ARNAUD JOE NIRMAL	IT	2
	AJAY KUMAR	IT	2
	PURUSHOTHAMAN	IT	2
2	SATHISHKUMAR A P	CSE	2
<b>BREAK THE QUERY</b>			
1	MANISH M	IT	2
2	SHANCHA PRIYA M	IT	3



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