



SURANA COLLEGE AUTONOMOUS

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News Letter - MCA Program

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INTERNALIZE ► EMPOWER ► EVOLVE

Dept. of MCA, Surana College, Bangalore

THE FOREWORD

As the editorial team behind our college magazine, we're thrilled to unveil the culmination of months of hard work, creativity, and collaboration. From brainstorming sessions to late-night editing marathons, bringing this magazine to life has been a labor of love.

Collecting and organizing the diverse content within these pages was no small feat. We sifted through submissions, conducted interviews, and carefully curated each piece to reflect the vibrant spirit of our campus community. It's been an incredible journey of discovery, uncovering untold stories and amplifying voices that often go unheard.

We extend our heartfelt thanks to every contributor who shared their talents, experiences, and perspectives. Your words and artistry have breathed life into these pages, enriching our magazine with depth and diversity.

Special gratitude is also due to the Managing Trustee, Dr. Archana Surana and the director of MCA, Dr. Srinivas A, for their continuous support in every venture. Many thanks to the department for allowing us to steward this project. Your support and guidance have been invaluable, empowering us to realize our vision and connect with our audience meaningfully. The department welcomes Dr. Punith Cariappa onboard as group director of SEI

As you peruse these pages, we invite you to join us in celebrating the myriad voices and stories that make our college community so unique and vibrant. Thank you for being a part of this journey with us.

Editorial Team



Prakash R

2nd Year MCA



Thejas Prasad A H















2nd Year MCA



Ravi Kumar R

2nd Year MCA

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From the Director's Desk



With justifiable pride, it can be placed on records that we meet the demands of new-age students and work with self-conviction, commitment, and complete focus. The path to perfection is not easy yet we achieve it. We have will and the potential.

Hearty congratulations to team MCA (Colleagues and Students of Computer Science) for taking the department activities to a higher level with your passion and unclinged commitment. It can be placed on records that programs such as Sadhana bring value addition to our MCA programme and eventually evolved as USP of the department.

The road map given by me more than a decade back is meticulously getting executed by you and shaped you into a confident and competent individual. Your journey from enthusiastic beginner to disillusioned learner to reluctant contributor to peak performer is highly valued.

Some people are consistently successful because of the qualities and abilities they develop in addition to the curricular aspects. My dear friends let me firmly state one thing, genuine career happiness comes from achieving personal goals in harmony with organizational goals. Wishing all the best for the rest of the years.

Dr. A Srinivas

Director (L&D) - Surana Educational Institutions

Director MCA

From the HOD's Desk....



With the revolutionary computing technologies at its forefront, the Indian IT sector is growing exponentially. While the dramatic growth is enabling a smarter planet, it has also created a dearth of proficient IT professionals. But fortunately, there are multiple academical courses offered by various colleges and institutions, which aim to meet the rising demand. Amongst them, MCA course is considered as one of the most sought-after. This post-graduation course helps an individual to hone the required technical skills to develop avant-garde tools and digital applications.

Our students and alumni have played a very important role in our success story. We are ever grateful to our students and alumni for their involvement in executing the visions of the department. We are also proud to say that, over the years, we have been able to maintain a strong bond between our alumni and the department. The objective of the department has always been to give the best to our students. The autonomous status has given us academic freedom to emphasize practical learning experiences.

Dr. K Balaji
HOD, Dept. of MCA

MCA FRAMEWORK



From the Left: Mr. Akshay, Mr. Chandan Hegde, Mrs. Bhavana, Mrs. Bharathi, Dr. K. Balaji, Mrs. Hemaprabha, Mr. Manikantan, Mr. Sujay Srinivas

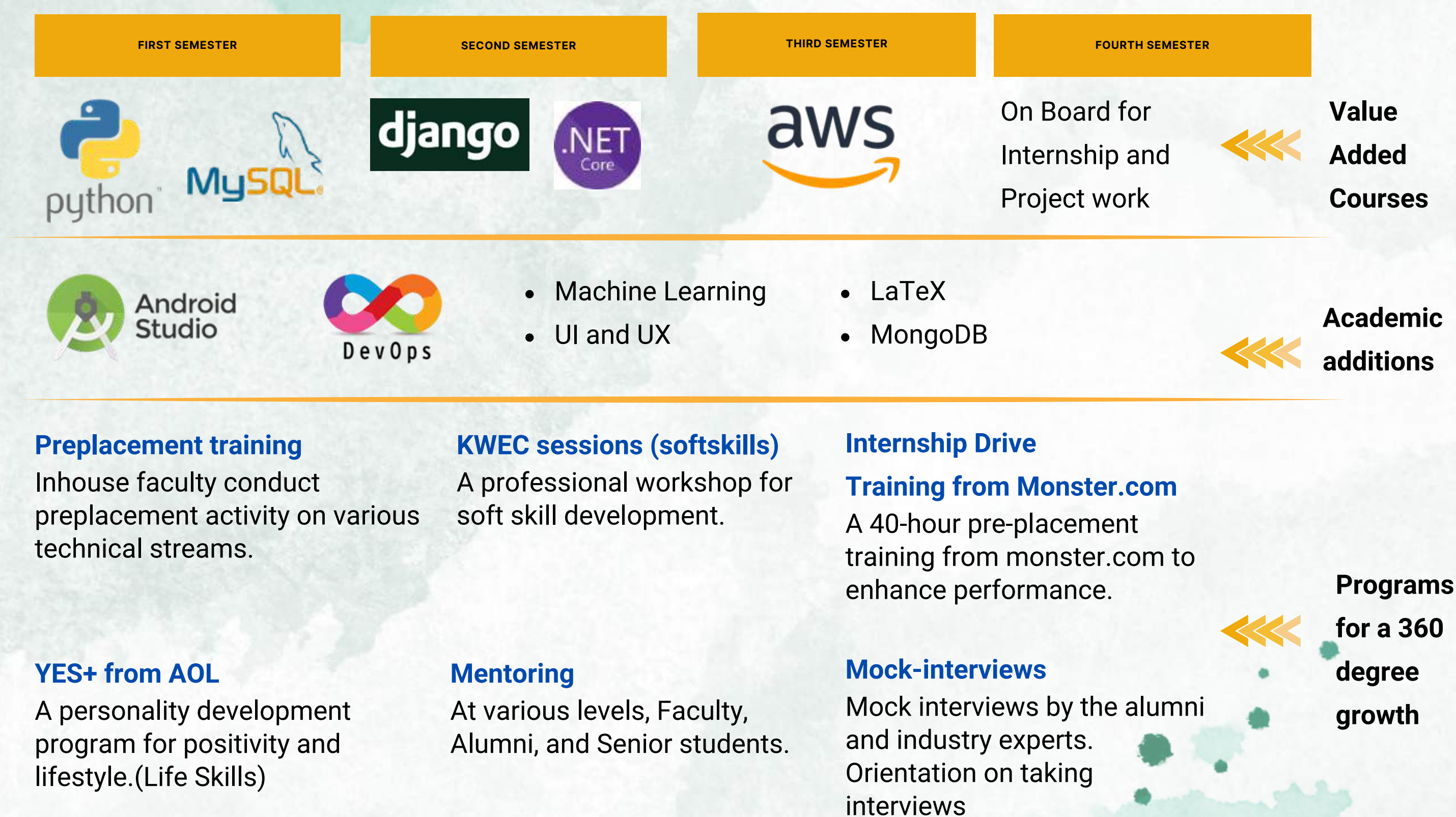
The department of MCA was established in the year 2000. MCA is offered as a two-year program with a current intake of 60. The program is approved by AICTE and is autonomous under the affiliation of Bangalore University. The course is intended to produce qualified professionals well-equipped with the necessary skills and knowledge to meet the growing demand in Computer Science and Applications. The course emphasizes programming languages, web technologies, software testing, software engineering and application development requisites to fulfill the IT requirements. In contrast, the essence of basic mathematics, statistical concepts, and computer fundamentals provide a vital foundation. Introducing practical teaching aids to enhance every aspirant's ability to identify, analyze, model, and solve a problem through computation has been the primary objective of this course.

In addition, the department offers various cutting-edge technologies as add-on courses and personality development workshops from industry experts to the student community. The MCA program has been designed to give equal stress on theoretical and practical learning in applied computer science. It is envisioned to deliver an updated industry-oriented education to meet the expectations of the leading corporations of Silicon Valley. The department of MCA has secured twelve University ranks and eight gold medals.

MCA PROGRAM ROADMAP

Preinduction activities: Google Certification, Talk about yourself, Project HTML, Ted-talk review, Google form Know-how, Resume Building, online certifications.

Induction program: Orientation of comprehensive curriculum, Campus experience (Infra, ICT & Library), Student support activities, mental well-being, physical fitness, emotional balance, intro to clubs and forums activities, ideation/entrepreneurship, techno trends.



SADHANA – THE IT CLUB (WEEKLY)

- | | | | |
|---|---|--|--------------------------------|
| <ul style="list-style-type: none"> Communication skills Team building Panel / Group Discussion | <ul style="list-style-type: none"> Presentation skills Technical skills Case Studies | <ul style="list-style-type: none"> Leadership Aptitude Tests Paper presentation / Publication | IT Club Activity |
| <ul style="list-style-type: none"> Web Designing UI/UX Development | <ul style="list-style-type: none"> Android Development Cloud Architecture | <ul style="list-style-type: none"> Data Analytics Machine Learning | MOOC and online courses |

KAPOOR'S WORKSHOP FOR EFFECTIVE COMMUNICATION



The Department of MCA conducted a 3-day workshop for the students of first-year MCA in association with Kapoor's Workshop for Effective Communication (KWEK). The objective of the workshop is to sharpen various communication skills. The first two days of the workshop were held at the Kengeri Campus. It focused on presentation skills and team performance. The third day of the workshop was arranged at the Microlabs Guest House, Kudlu Gate, Bangalore. Students enjoyed the outbound activities held at the venue. Many team-building activities were conducted. The resource person from KWEK, Mr. Palani Rajan led the activities and deliveries for all three days. The workshop commenced on 31st July 2023 and ended on 02nd August 2023.



GLIMPSES OF KWEC



DEPARTMENT EVENTS

Workshop on MERN craft



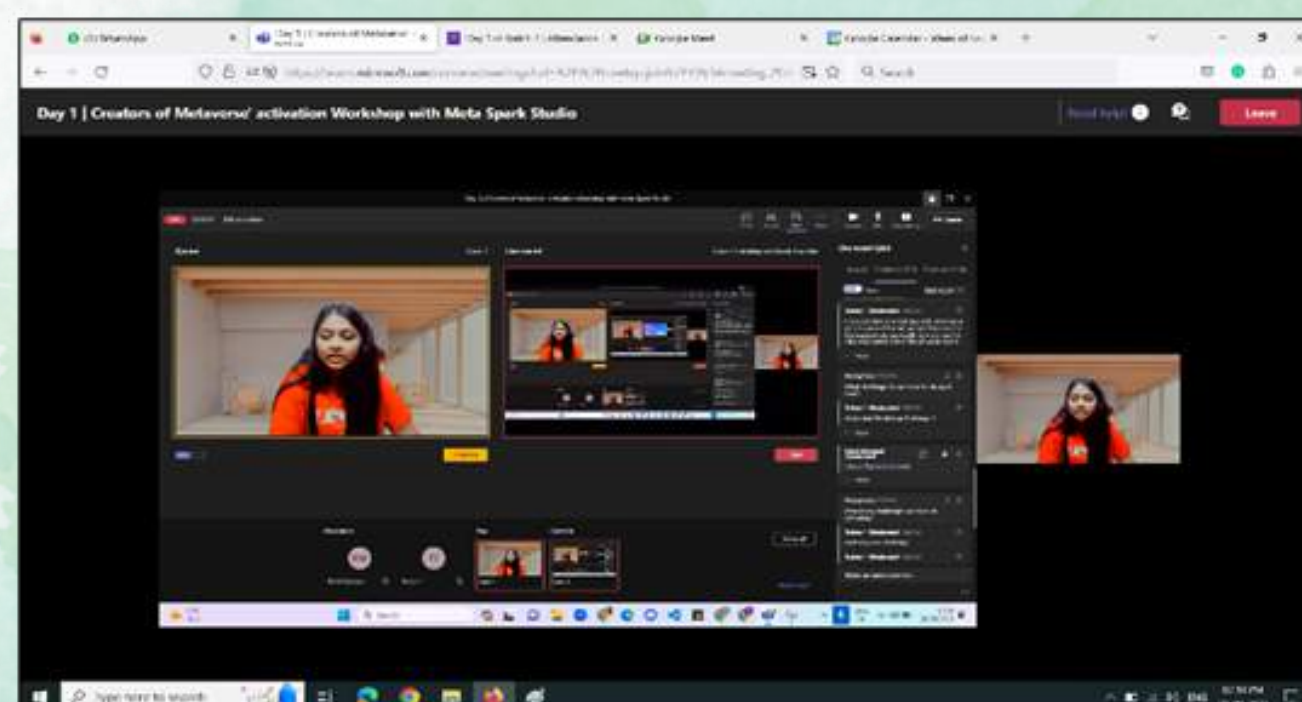
The department of MCA organized a 2-day workshop on JavaScript and MERN stack. The workshop aimed to deliver some of the key technologies in JavaScript. This would help the third-semester students pick up some of the required web developer skills. Additionally, keeping the mini-project requirements of the third-semester MCA program, the workshop delivered a stack of technologies using which the project could be built.

Workshop on Creators of Metaverse

The department of MCA in association with 1M1B and AICTE participated in an online 2-day workshop on “Creators of Metaverse” on 28th and 29th September 2023. The objective of the workshop was to introduce our young minds to the world of Metaverse and AR technologies. A total of 60 MCA students attended the workshop.

The following is the detailed agenda of the workshop:

- What is Metaverse?
- What is XR?
- AR Categories and Applications
- Future of Metaverse
- Career Opportunities
- Meta Spark Studio Interface
- Creating the AR effects
- Publishing Guidelines



PRICELESS MOMENTS

Ethnic Day-

"Tradition can never go out of fashion."

(27-07-2023)



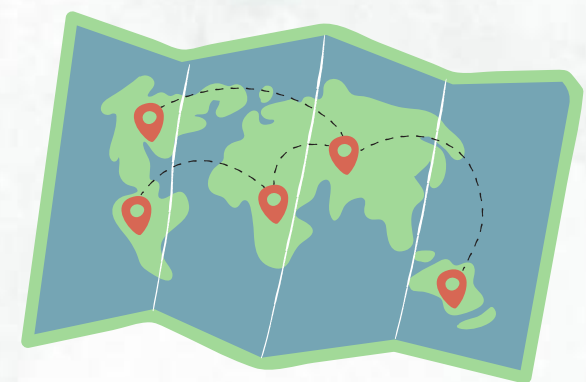
PRICELESS MOMENTS

Colours Week
(22-10-2023 - 28-10-2023)



PRICELESS MOMENTS

Trips & Moments- “Go, Find,Explore”



PRICELESS MOMENTS

Trips & Moments- “memorable phrases”



PRICELESS MOMENTS

Inter College Fest - “Learning outside the Classroom”



The students of MCA program attended various intercollegiate fest and have won prizes. This semester the students have attended three colleges, Dayanand Sagar College Institute of Technology, Community Institute of management and Science, Kristu Jayanti.

PRICELESS MOMENTS

Srujana- “Cultural Vibes”



The postgraduate departments of Surana College are celebrating a cultural week under the banner of “Srujana” this year. The events were scheduled for the month of July. Students from all PG departments are enthusiastically participating in various activities including rangoli, dance, singing, t-shirt painting, mehendi, and cook-without-fire competitions. Additionally, many activities are planned for both the teaching and non-teaching fraternity of the campus. The winners of these competitions will be honored during the college's annual day celebration.

Srujana Prize Valedictory



PRICELESS MOMENTS

Annual Sports Meet



PRICELESS MOMENTS

Graceful Farewell

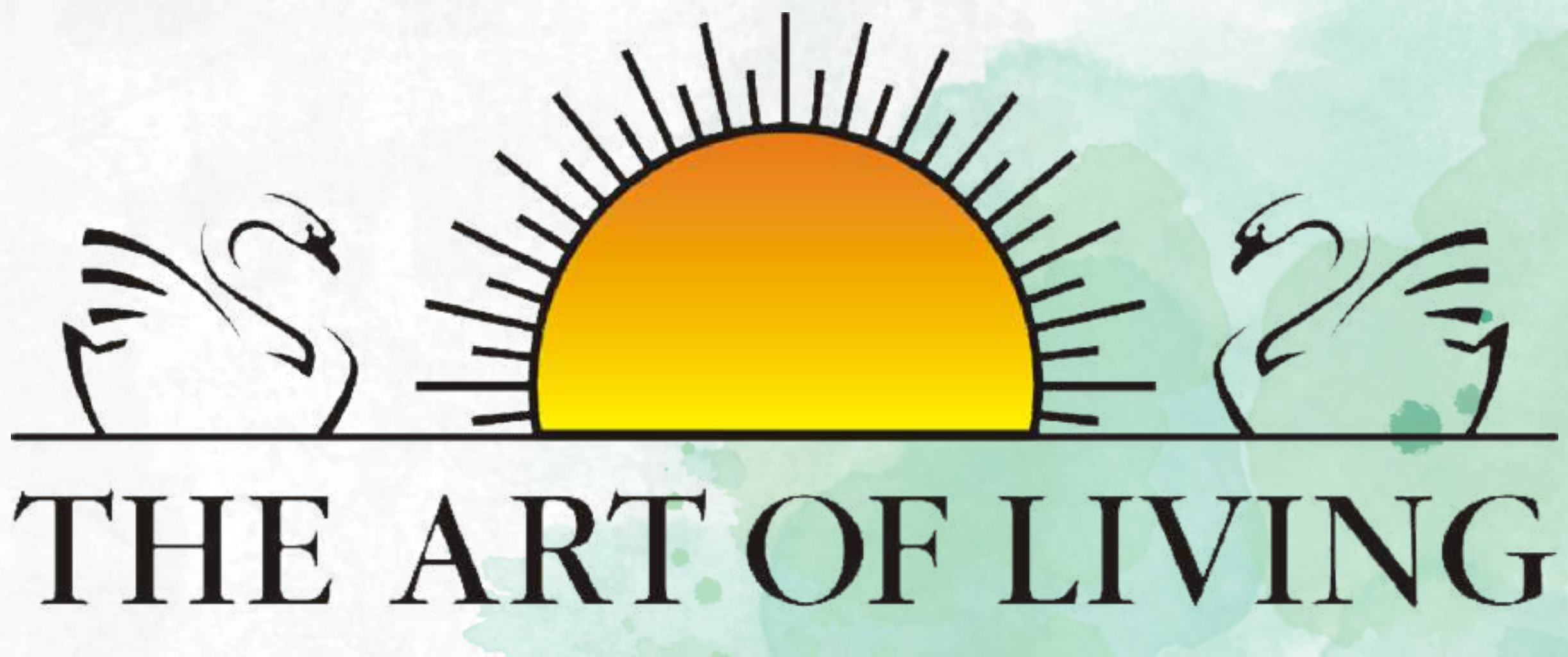


PRICELESS MOMENTS

Art of Living- “For emotional balance”



The department of MCA hosted a 6-day life skills and mind management program titled YES+ from the Art of Living, Bangalore team. The event started on 7th August 2023 at our Kengeri campus. A 5-day in-house program included sessions on mind and meditation, exploring the breath, power of responsibility, building interpersonal skills, and inner peace and outer dynamism. A total of 60 students from MCA participated. The 6th day was an outbound program at the Art of Living campus, Kanakapura Road where the students and the department faculty got to experience the campus tour.





The Concept of Sadhana was inducted into the MCA Department by Dr. A Srinivas in the academic year 2005-2006. "Practice makes man perfect" is an old saying and this word is a new world order for that, we have changed the quote to "Practice for Perfection", which is the caption for our IT club called SADHANA. Sadhana is a weekly event conducted by the students, for the students to improve their soft skills and to practice certain skills needed for their fruitful IT careers.



SADHANA INAUGURATION- 2023

The 18th Season of Sadhana 2023-24 - The IT Club was inaugurated on 5th August 2023, with esteemed guests Mr. B Ashok, an alumni and Lead Software Developer at Siemens, and Ms. Namratha Deepthi A, a Management Consultant at Accenture. The event began with a warm welcome from Prof. Chandan Hegde, followed by an address from Dr. A Srinivas, Director of L&D at SEI. Mr. Ashok B, the chief guest, delivered a compelling keynote address on leveraging ChatGPT for software testing. Ms. Namratha Deepthi shared valuable insights on technological advancement and the significance of continuous skill enhancement in the IT field. The occasion also featured the unveiling of the department's magazine - "The Impressions". Additionally, the schedule for the entire season's events was announced, promising a rich array of activities and learning opportunities for all participants.

As the event drew to a close, heartfelt gratitude was extended to all dignitaries and contributors whose efforts ensured the success of the inauguration, setting a positive and inspiring tone for the upcoming season of Sadhana - The IT Club.

Glimpses of the event



SADHANA 2023 SEASON-1

DATE OF EVENT	ORGANIZING TEAM	EVENT NAME	RESULTS
10-08-2023	Super Sonics	"Career roadmap" - Your career your priority.	Winners: Brainiacs Runners: Techno Sparks
17-08-2023	Dev kings	"Make it Work" - A Bug is an undocumented feature	Winners: Brainiacs Runners: Recursion
21-08-2023	IT Elites	"Conference Corner"- Speak your thoughts	Winners: Brainiacs Runners: Cloud Stroms
24-08-2023	Recursion	"Sell me this" - Incredible sale for Incredible people	Winners: Dev Kings Runners: Cloud stroms
31-08-2023	Runtime terrors	"Dig the Statement"- Solution awaits with Research	Winners: Super Sonics Runners: Recursion
04-09-2023	Brainiacs	"Query Quest"- Unlock knowledge with SQL Queries	Winners: Recursion Runners: Tech Globe
08-09-2023	Tech Titans	"Code story" - Unlocking the secrets of Code	Winners: cloud Strom Runners: Tech Co Leaders
14-09-2023	Tech Fauget	"Code Chef" - Programming through hurdles	Winners: Tech Globe Runners: Super Sonics, Brainiacs
21-09-2023	Techno Sparks	"Code Craft"- Turning ideas into websites.	Winners: Super Sonics Runners: Tech Globe
25-09-2023	Techie Tribes	"Zen Talks" - A panel discussion forum on tech ethics.	Winners: Super Sonics Runners: Brainiacs
29-09-2023	Tech Globe	"Design Desk" - A web design like never before	Winners: Super Sonics, Run time Terrors Runners: Techie Tribe
05-10-2023	Wizards	"Model Minds" - Future Of Creativity	Winners: Tech Fauget Runners: Dev Kings
09-10-2023	Tech co-leaders	"Data analysis Olympiad" - Realizing the potential of Data Visualization.	Winners: Wizards Runners: Tech Fauget
13-10-0023	Cloud Stroms	"The Seekers Of Secrets"- The thrill of Treasure Hunt	Winners: Techno Sparks Runners: Wizards

SADHANA 2023 GLIMPSES



"Design Desk" - A web design like never before



"Career roadmap" - Your career your priority.



"Model Minds" - Future Of Creativity



"Zen Talks" - A panel discussion forum on tech ethics.



"The Seekers Of Secrets"- The thrill of Treasure Hunt



"Patch Up Paperwork" - Transforming Paper into masterpiece

SADHANA 2023 GLIMPSES



"Sell me this" - Incredible sale for Incredible people



"Code Chef" - Programming through hurdles



"Conference Corner"- Speak your thoughts



"Make it Work" - A Bug is an undocumented feature

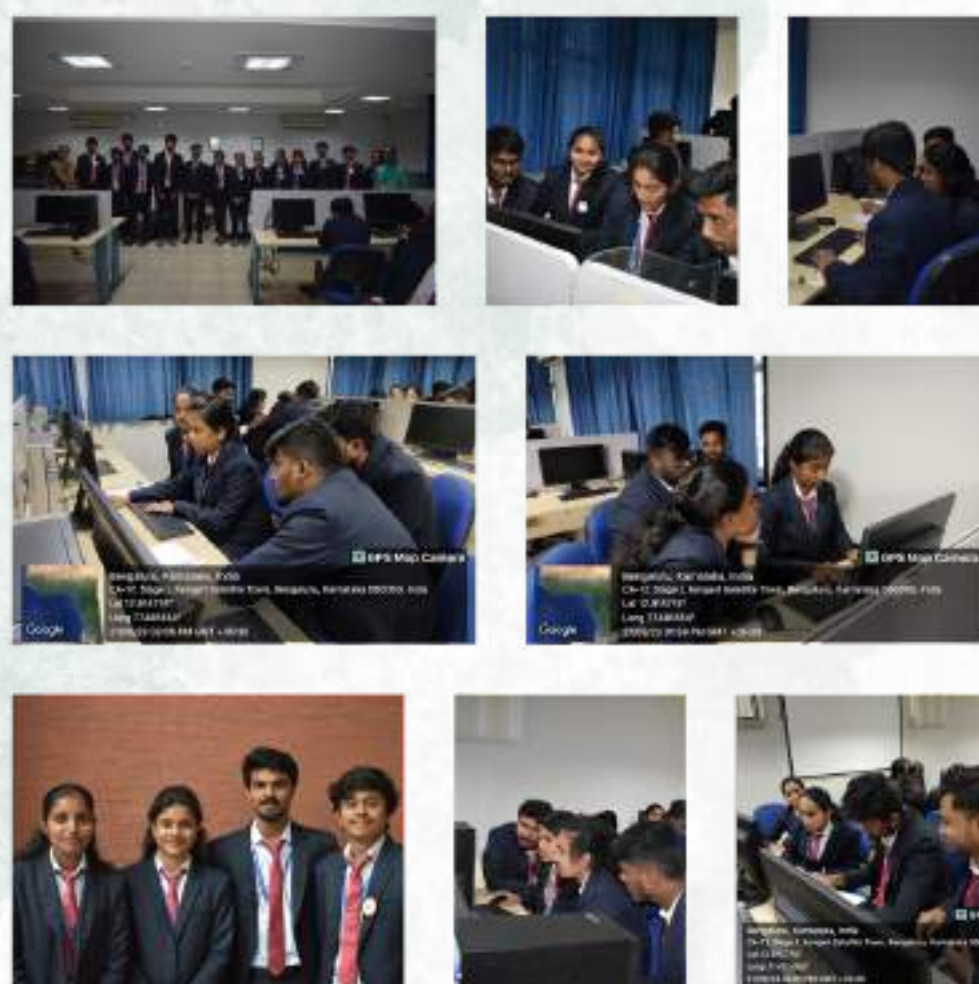
Sadhana 2023 Glimpses



"Dig the Statement"- Solution awaits with Research



"Data analysis Olympiad" - Realizing the potential of Data Visualization.



"Code Craft"- Turning ideas into websites.



"Query Quest"- Unlock knowledge with SQL Queries



"Code Chef" - Programming through hurdles

SADHANA 2023 SEASON-2

DATE OF EVENT	ORGANIZING TEAM	EVENT NAME	RESULTS
22-12-2023	TECHI TRIBES	IT MANAGER-"empowering inovations"	Winners: Tech Fauget Runners: Tech-co Leaders,Brainiacs
29-12-2023	TECHNO SPARKS	BOOTSTRAP-"Innovate. Develop. transform"	Winners: Super Snonics Runners: Devi Kings
04-01-2024	DEV KINGS	SCENARIO BASED CODING-"Make it work ,Make it right,Make it fast"	Winners: Tech Fauget, Super Sonics Runners: Recurssion
11-01-2024	SUPER SONICS	DS DEEP THIKERS-"Transforming logic into gold"	Winners: Tech-co Leaders Runners: Recurssion, Tech Titans
18-01-2024	TECH GLOBE	INTERVIEW INSIGHTS?-"Success in where preparation and opportunitry meets"	Winners: Techno Sparks Runners: Super Sonics
25-01-2024	TECH FAUGET	INVEST ON MINE-"Be and think like a Entrepreneur"	Winners: Cloud Stroms Runners: Techie Tribe
01-02-2024	IT ELITES	DEBATE-"Speak your thoughts"	Winners: Super Steller Runners: Incognito
01-02-2024	TECHI TRIBES	MIND MAZE CHALLENGE-"One line of code at a time"	Winners: Dev Kings Runners: Tech Titans
08-02-2024	TECH-CO LEADERS	CRAFTING CONNECTIONS-"Exploring UI Designs for Dynamic Marketplaces and User Journeys")	Winners: Techie Tribe Runners: Tech Fauget
08-02-2024	TECH GLOBE	CODE HUB-"coding thorough hurdles"	Winners: Tech Vampires Runners: Digital Dynamos
15-02-2024	TECH TITANS	RECENT INNOVATION-"Exploreing the cutting edge"	Winners: Wizards Runners: Techie Tribe, Geek Sprits
15-02-2024	TECH FAUGET	QUERY QUEST-"Unlock the knowledge with queries"	Winners: Tech Espy Runners: Pseudo Coders

Sadhana 2023 Glimpses



IT MANAGER-"empowering inovations"



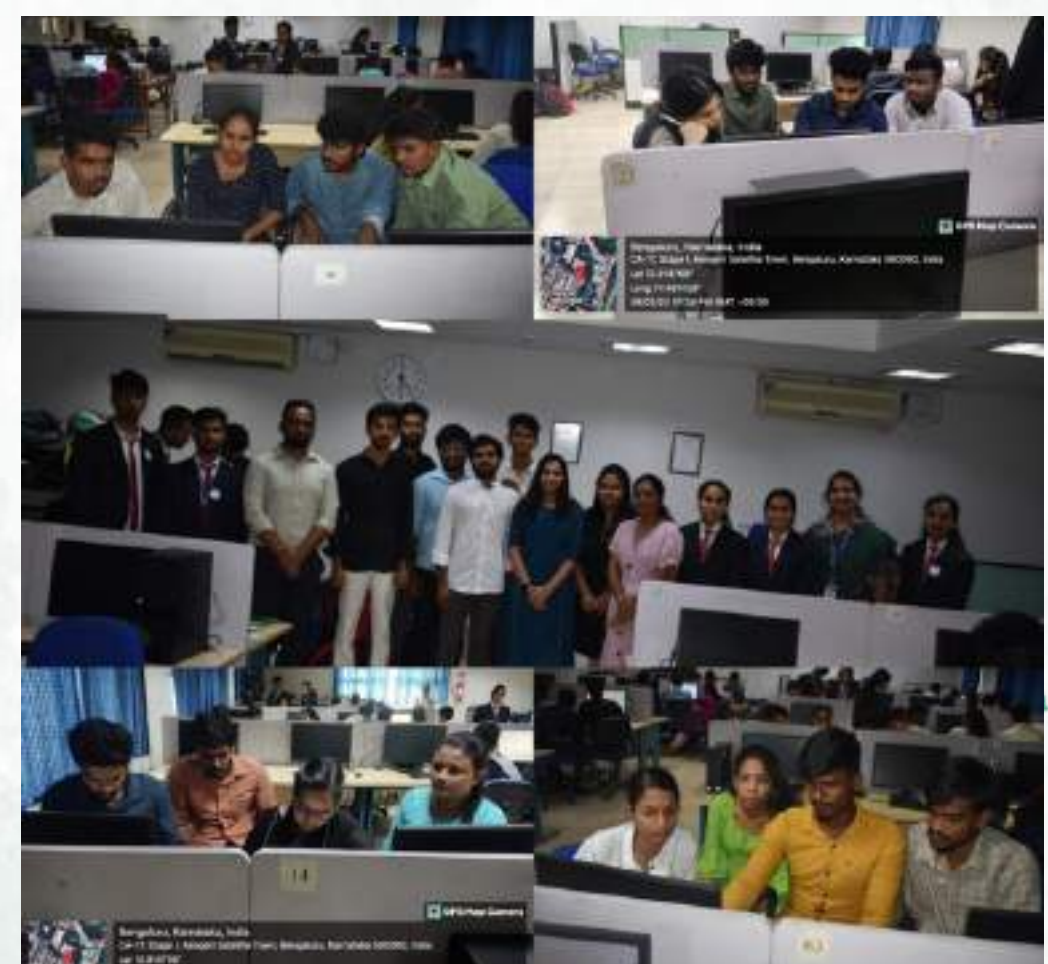
MIND MAZE CHALLENGE-"One line of code at a time"



RECENT INNOVATION-"Exploring the cutting edge"



INTERVIEW INSIGHTS?-"Success in where preparation and opportunity meets"



CODE HUB-"coding through hurdles"



QUERY QUEST-"Unlock the knowledge with queries"

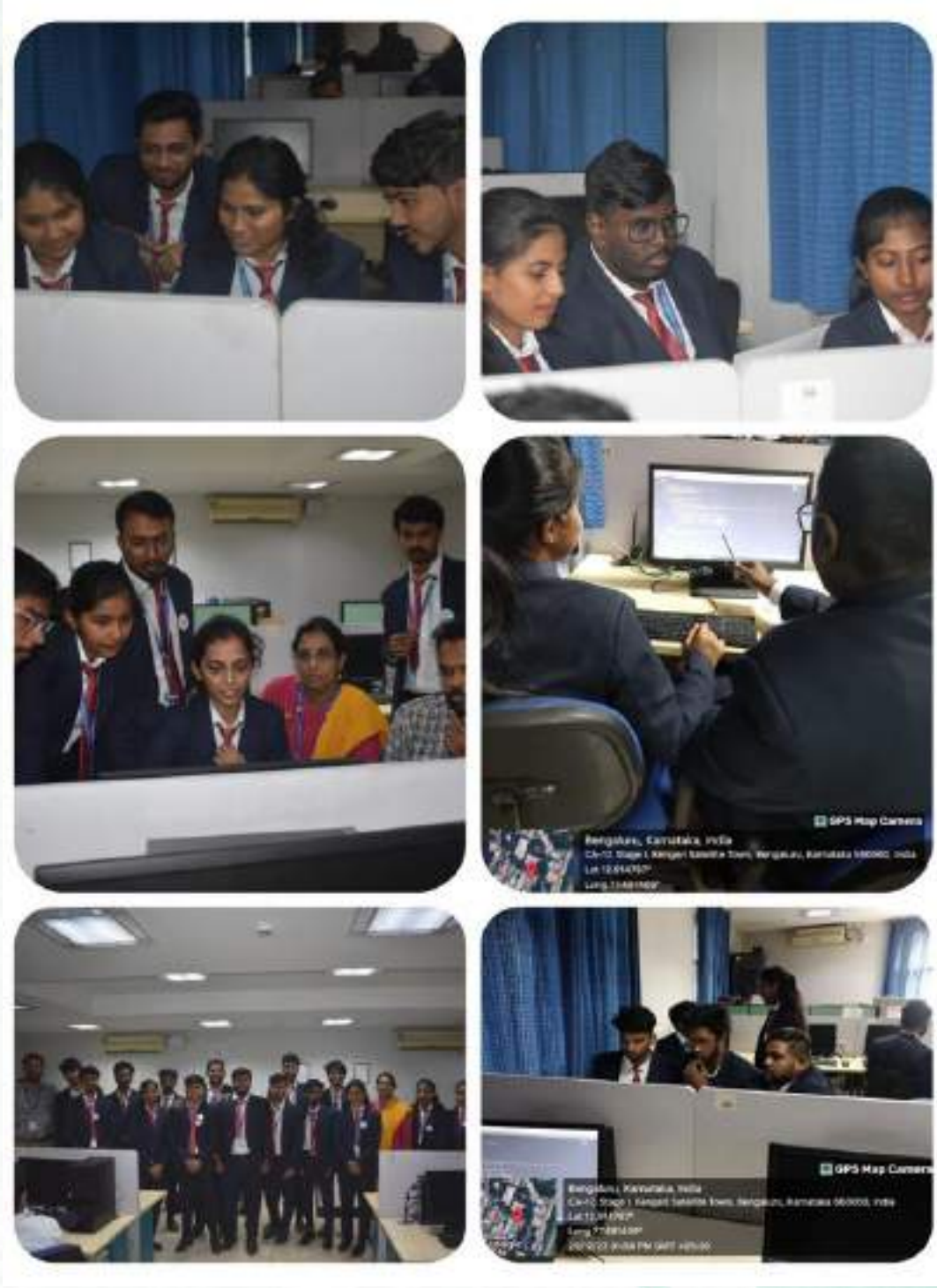
Sadhana 2023 Glimpses



SCENARIO BASED CODING-"Make it work ,Make it right,Make it fast"



DEBATE-"Speak your thoughts"

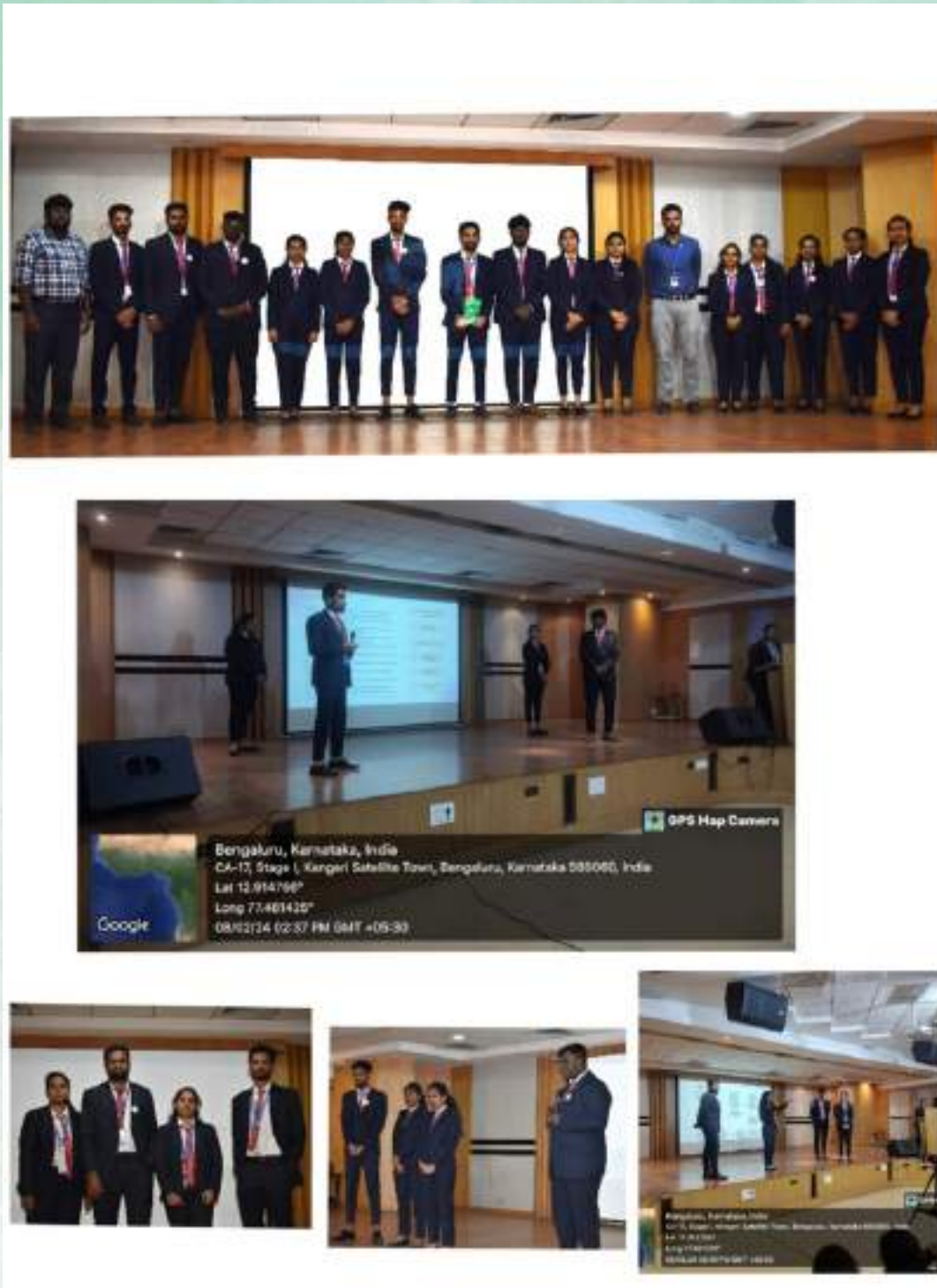


BOOTSTRAP-"Innovate. Develop. transform"



DS DEEP THIKERS-"Transforming logic into gold"

Sadhana 2023 Glimpses



CRAFTING CONNECTIONS-"Exploring UI Designs for Dynamic Marketplaces and User Journeys")



INVEST ON MINE-"Be and think like a Entrepreneur"

SADHANA



Indian Tech Sector

Navigating the Shifts: The Indian Tech Sector's Journey

In the world of technology, staying ahead means adapting fast and innovating faster. For computer science students eyeing the future, the Indian tech sector's recent journey provides both a roadmap and inspiration. FY2023 has been a pivotal year, marked not by flamboyant breakthroughs but by steady growth and strategic shifts that matter.

Growth in Simple Terms

India's tech industry, including hardware, saw its revenue cross \$245 billion, a straightforward 8.4% growth from the previous year. This growth reflects a deeper trend: the increased reliance on technology across all sectors. For students, this means a broader canvas for innovation and application of their skills.

Job Market and Opportunities

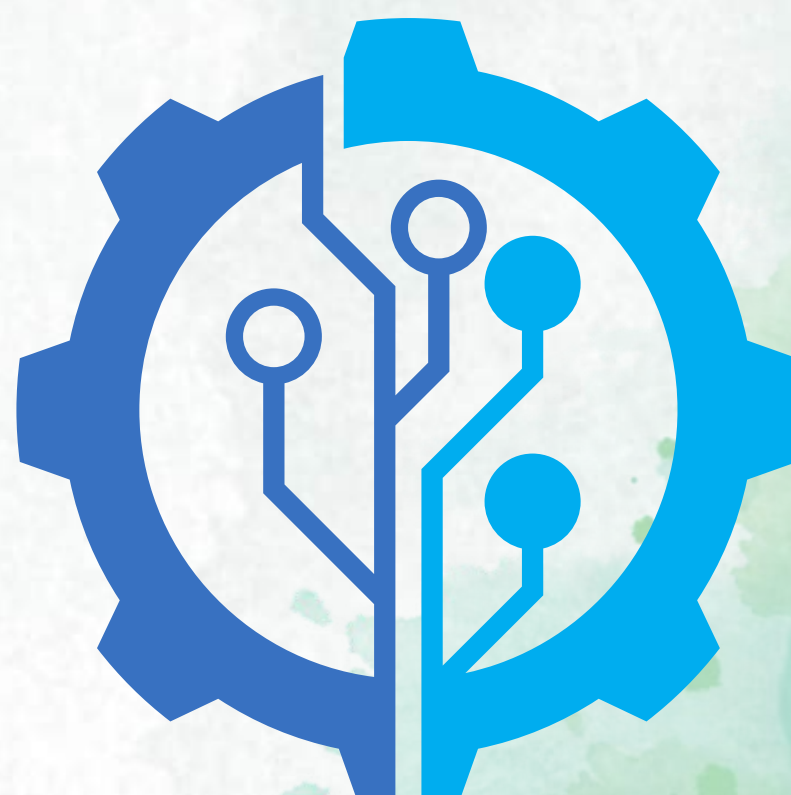
One of the highlights has been job creation. With nearly 300,000 new jobs added, the tech industry now employs about 5.4 million people. This is good news for students about to step into the professional world, indicating a strong demand for tech talent.

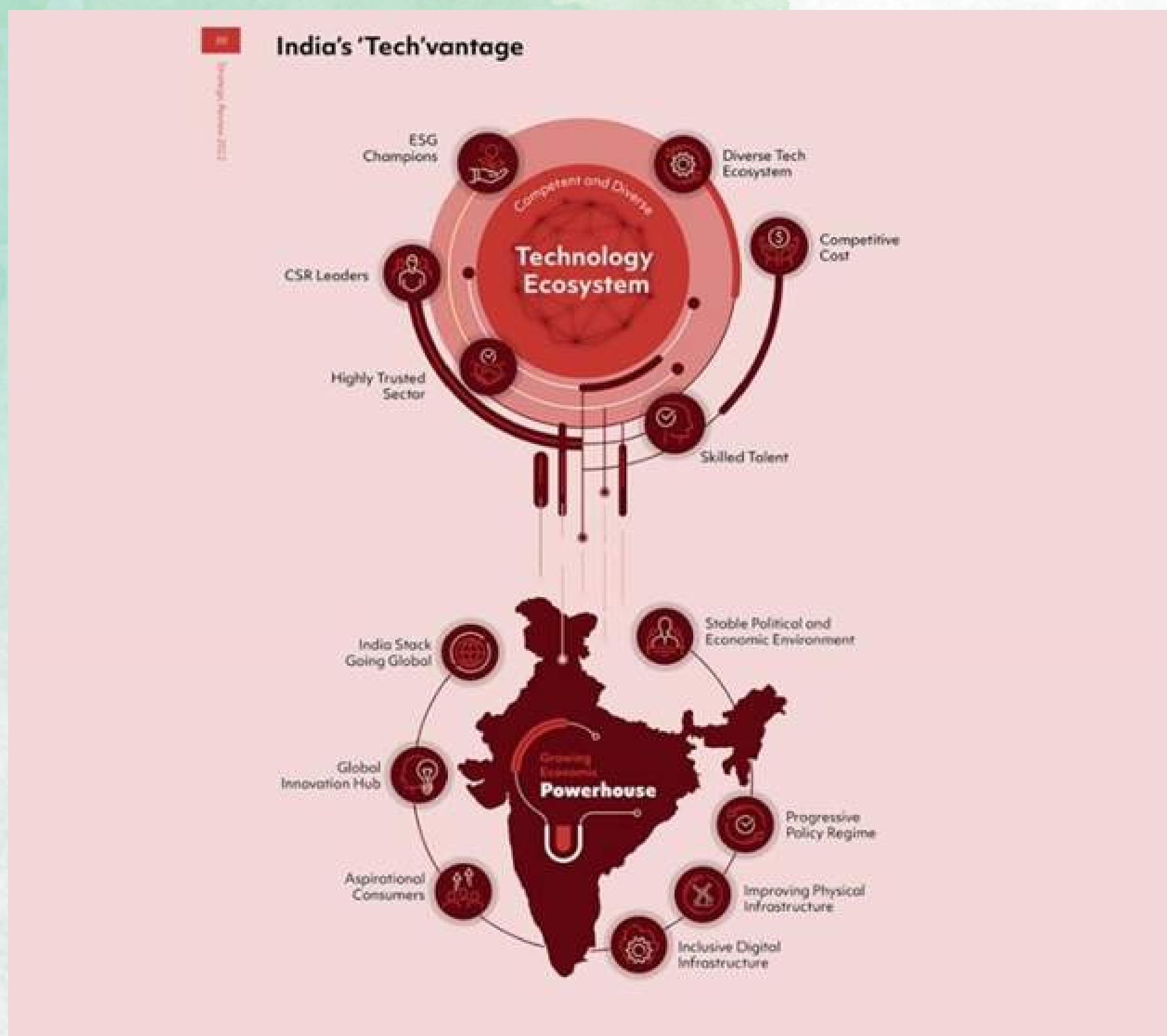
The Global and Local Mix

While India's position on the global stage is strengthening, it's the local tech ecosystem that's particularly exciting. The industry's growth is supported by investments from both enterprises and the government. For students, this means opportunities not just in big multinational companies but also in startups and local tech firms focusing on solving India-specific challenges.

Skills in Demand

The tech sector's evolution also points to the kind of skills that are becoming more valuable. Apart from coding and technical capabilities, there's a growing emphasis on problem-solving, innovation, and the ability to work on diverse teams. The industry's push towards digital transformation across sectors opens up avenues for those interested in fields like AI, machine learning, cybersecurity, and cloud computing.





Source: Nasscom

The Road Ahead

As computer science students, the journey ahead in the Indian tech sector is promising. The industry's growth, driven by a combination of domestic demand and global engagement, offers a vibrant landscape to apply your skills, innovate, and contribute to impactful projects.

Moreover, with India's tech scene becoming more inclusive and diverse, there's a place for everyone willing to learn, adapt, and grow. Whether you're drawn to the creative possibilities of software development, the challenges of cybersecurity, or the innovations in AI and machine learning, the sector is ripe with opportunities.

In conclusion, for those at the cusp of their tech careers, the narrative of the Indian tech sector in FY2023 is not just about numbers. It's about the underlying shifts towards a more digital, efficient, and inclusive future. It's an invitation to be part of a journey that's shaping not just the future of technology in India but also the global tech landscape.



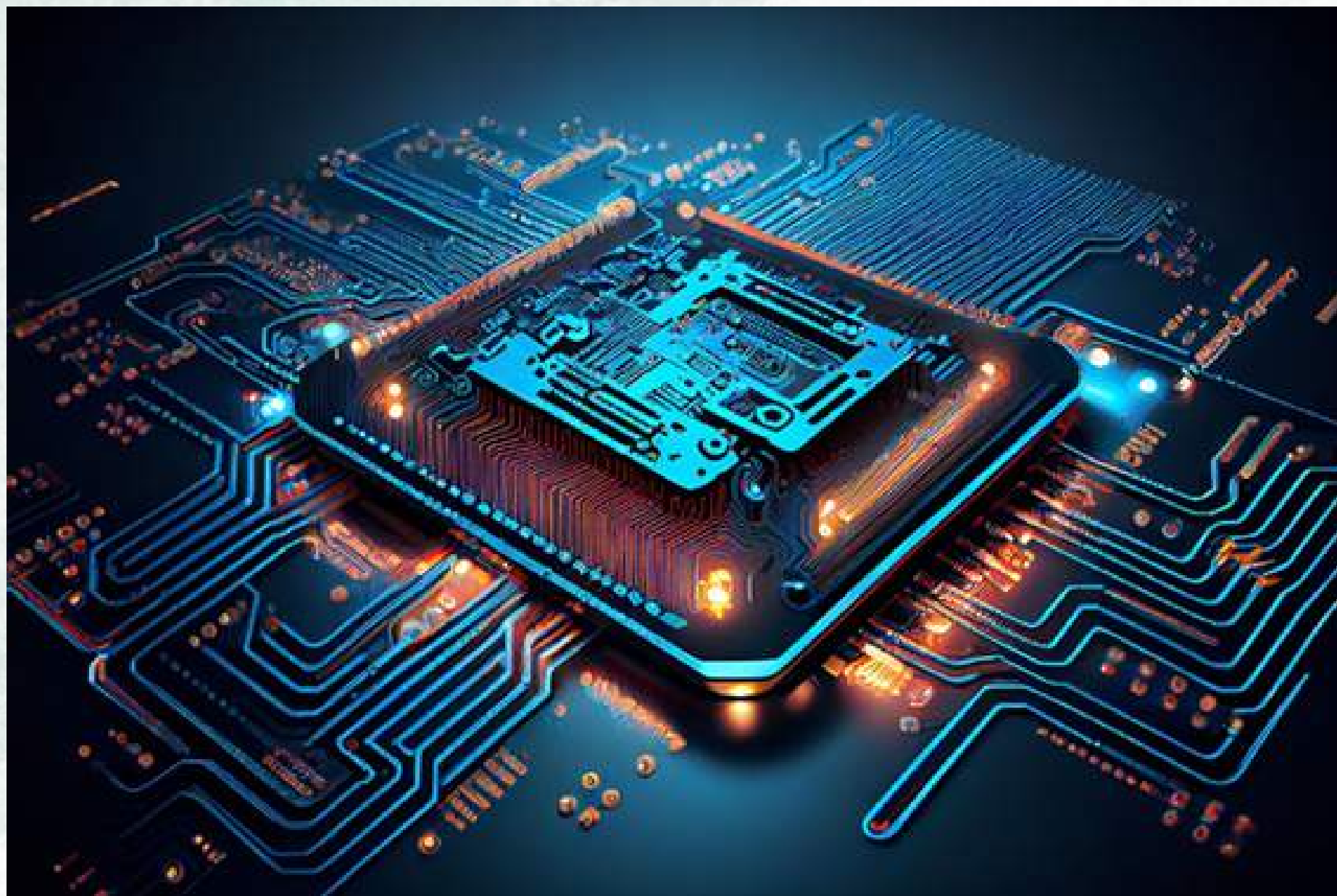
Dr. A Srinivas
Director - L&D, SEI
Director - MCA

Quantum Computing

(Unleashing the Power of Quantum Mechanics in Information Processing)

Introduction:

Quantum computing represents a revolutionary paradigm in information processing, harnessing the principles of quantum mechanics to perform computations that were once thought to be impossible for classical computers. This cutting-edge field has garnered significant attention in recent years, promising to solve complex problems and revolutionize industries across science, finance, cryptography, and more.



Understanding Quantum Computing:

Quantum Bits (Qubits): Unlike classical bits that exist in a state of either 0 or 1, qubits can exist in a superposition of both states simultaneously. This unique property exponentially increases the computational capacity of quantum computers, enabling them to process vast amounts of information in parallel.

Entanglement: Quantum entanglement is another fundamental principle that sets quantum computing apart. When qubits become entangled, the state of one qubit becomes dependent on the state of another, regardless of the physical distance between them. This interconnectedness allows for faster and more efficient information transfer.

Quantum Gates: In classical computing, logical operations are performed using classical gates (AND, OR, NOT). Quantum computers use quantum gates to manipulate qubits, and quantum algorithms leverage the principles of superposition and entanglement to perform complex computations.

Applications of Quantum Computing:

Optimization Problems: Quantum computers excel at solving optimization problems, such as route optimization, financial portfolio optimization, and supply chain management.

The ability to explore multiple solutions simultaneously allows for more efficient and accurate results.

Cryptography: Quantum computing poses both challenges and opportunities for cryptography. While quantum computers could potentially break existing encryption methods, they also offer the possibility of quantum-safe encryption techniques, such as quantum key distribution.

Drug Discovery and Materials Science: Quantum computers can simulate molecular and atomic interactions with unparalleled precision. This capability accelerates drug discovery processes, material design, and the understanding of complex biological systems.

Machine Learning: Quantum computing has the potential to enhance machine learning algorithms by processing and analyzing large datasets exponentially faster than classical computers. This could lead to advancements in artificial intelligence and data analysis.

Challenges and Future Outlook:

Decoherence: Quantum systems are delicate and susceptible to decoherence, where external influences disrupt the quantum state. Researchers are actively working on error correction techniques to mitigate this challenge.

Hardware Development: Building and maintaining stable quantum hardware is a formidable task. Companies and research institutions worldwide are investing in the development of scalable quantum processors and error correction methods.

Education and Expertise: Quantum computing requires a deep understanding of quantum mechanics and specialized skills. Bridging the gap between quantum physicists and computer scientists is essential for advancing the field.

Conclusion:

As quantum computing continues to progress, it holds the promise of solving problems previously deemed insurmountable. While challenges remain, the potential applications across various industries underscore the transformative impact this technology could have on our approach to computation, analysis, and problem-solving in the years to come. Quantum computing represents not just a new chapter but an entirely new era in the realm of information processing.



Prof. Sujay Srinivas
Department of MCA

Artificial Intelligence in Psychology

Artificial Intelligence (AI) has been making significant strides in various fields, and psychology is no exception. AI offers new avenues for understanding human behaviour, enhancing therapeutic interventions, and advancing psychological research.

By leveraging computational models, machine learning algorithms, and natural language processing techniques, AI has the potential to revolutionise the practice of psychology in several ways.



The Role of Artificial Intelligence in Psychology

AI as therapist

Conversational AI agents (CAs), or chatbots, are proving valuable in mental health care. A 2023 meta-review found that “AI-based CAs significantly reduce symptoms of depression and distress” (Li et al., 2023, p. 1).

Recent advances in AI have enabled chatbots to move away from the constraints of rule-based conversations with clients. Natural language processing, deep learning, and generative AI (such as ChatGPT and Gemini) enable more complex issues to be understood and more personalised advice and treatment to be offered (Li et al., 2023).

With the introduction and availability of such tools, it is becoming much easier for psychologists and mental health professionals to create their own AI models for either interacting with clients directly or providing support for diagnosis and treatment (Lau, 2023; Raile, 2024).

AI as an expert system

Through enhancements such as adding speech recognition and natural language processing to expert systems, it is not difficult to imagine technology like Siri, Alexa, or Google Assistant offering therapist-like sessions or specialist advice at relatively low costs and without clients having to leave their homes (Tutun et al., 2023).

AI systems, sometimes referred to as decision support systems (DSS), provide other such opportunities, combining their body of expertise with personal records to monitor health conditions and spot potential contraindications for medical treatments (Tutun et al., 2023).

A 2023 review of an AI DSS found it highly successful at diagnosing mental health disorders based on answers to only 28 mental health questions without human input. They concluded that such AI systems could successfully “replace traditional paper-based examinations, decreasing the possibility of missing data and significantly reducing cost and time needed by patients and mental health professionals” (Tutun et al., 2023, p. 1272).

AI Use in Psychology

Mental health expert systems

Mental Health Diagnostic Expert System uses advanced AI technology to encode expert knowledge of mental health disorders, which it then uses to understand patients' needs and agree on treatment plans that suit their budgets and are appropriate alongside other health conditions (Masri & Mat Jani, 2012). More recently, the Network Pattern Recognition AI algorithm has been trained to diagnose patients' mental health needs based on answers to a series of questions. It has proven successful in supporting mental health professionals as they make evidence-based treatment decisions and guide policymakers on digital mental health implementations (Tutun et al., 2023)ental health professionals" (Tutun et al., 2023, p. 1272).

RP-VITA(Remote Presence –Virtual & Independent Telepresence Assistant)

The US Food and Drug Administration has approved the RP-VITA robot to provide remote communication between health care providers and patients. Powered by AI, it monitors patients' wellbeing remotely while accessing their medical records. The multidisciplinary system supports psychological, neurological, cardiovascular, and critical care assessments and examinations (InTouch Health, 2020)

AI-Based Psychology Apps

Woebot



Woebot, a Google Play Award winner, encourages users to think through situations using tools inspired by CognitiveBehavioral Therapy (CBT).

The mood tracker tracks positive changes made over days and weeks.

WYSA



WYSA is a research-validated chatbot supporting individuals experiencing anxiety, depression, and stress.

It begins by asking the user what challenges they face then uses AI to talk them through their moods, assess energy levels, and organise their thoughts.

Youper



Youper provides a personalised emotional health assistant to help treat stress, anxiety, and depression and has been validated by researchers at Stanford University.

The app uses techniques from several therapies, including CBT and mindfulness, to monitor and improve mental health through a series of brief conversations.

Replika



Replika is an AI-powered chatbot that provides an emotional connection and virtual friendship to support people going through depression, anxiety, or troublesome times.



Prof. Manikantan R
Department of MCA

Malnad Memories

Malnad, a region in the heart of Karnataka is different from the other regions in many ways. The name Malnad is made up of two Kannada words “Male” and “Nadu”, translating to “the land of mountains”. Here, once the rainy season starts, it rarely stops. The soothing symphony of heavy rain during this period evokes a sense of joy in the heart, vividly resurrecting childhood memories.

During this time, the preparation of a delightful treat involves extracting seeds from raw jackfruit, mixing them with coconut oil, and preserving the mixture. Enjoying warm rice accompanied by this jackfruit seed curry and coconut oil on a rainy evening or night feels nothing short of heavenly. Equally satisfying is the preparation of idlis with added salt, ensuring proper fermentation, and relishing them with a sprinkle of salt.

Recollections of school days intertwine with the rain, where getting caught in downpours often led to smudged slates and the rush to rewrite everything before the teachers arrived. A sudden rainfall while returning home from school without an umbrella would lead to a communal soaking, prompting discussions about acquiring stronger umbrellas or investing in a "Raincoat" or "Bade" (a raincoat made from plastic) for future occurrences.

Anticipation of returning home from school was met with the joy of playing in the rain, followed by changing into dry clothes upon arrival. Sipping a hot cup of coffee or tea with ripe jackfruit slices or roasted groundnuts while watching the rain from the window brought about another layer of contentment.

Brief pauses in the rainfall elicited excitement for outdoor play. However, slips and falls on the wet ground would temporarily halt the games, redirecting everyone indoors to engage in board games like "Guddu, Pagdi, Haudu, and Hidikaddi" or crafting paper boats, acknowledging that rain was better enjoyed from within.

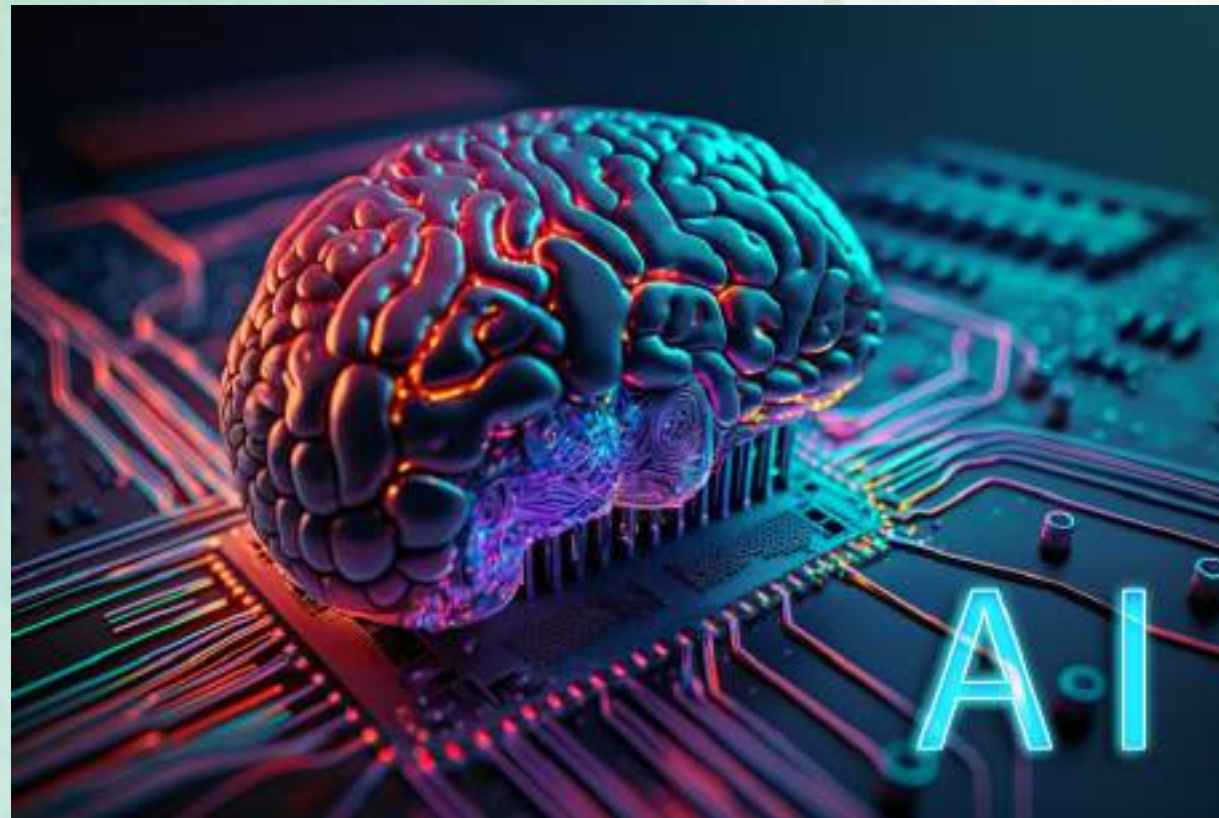
Observing the rain's impact on crops brought about concerns regarding its duration and potential effects on the harvest. Excessive rainfall often resulted in school closures until the water receded, ensuring the safety of all.

The sight of wet clothes and schoolbooks prompted swift actions to dry them, often leading to debates over whose belongings should take precedence, especially when they belonged to siblings.

Vachana A C
2nd Year MCA



GLIMPSES OF ARTIFICIAL INTELLIGENCE



Artificial intelligence (AI) saw its inception in 1950, marking a significant frontier in computer science. John McCarthy, credited as the "Father of artificial intelligence," made the term. The evolution of AI began with early research in the 1950s, focusing on problem-solving and symbolic methods. Subsequently, in the 1960s, the US Department of Defence search into the development of gadgets, initiating the training of computers to emulate fundamental human abilities such as voice recognition, problem-solving, decision-making, and language translation, collectively referred to as artificial intelligence. The process of making computers understand, think, and act like humans involves embedding data as instructions and inputs.

Impact:

The impact of AI is extensive and transformative, reaching into sectors like healthcare, education, and transportation. Its applications span from diagnosing diseases to personalizing learning and enhancing traffic management, even extending to the deployment of food server robots.

Taking Over Industry:

AI's integration into industries has led to concerns about potential unemployment. Decrease a need for human assistance, the extent of control over technology remains within the purview of humanity. Emphasizing the idea that technology works best when connecting people underscores the symbiotic relationship between humans and AI.

AI In Everyday Life:

Technological advancements, particularly in AI, have become common in our lives, impacting businesses and social interactions. The subtle penetration of AI into various aspects of daily life, such as face ID, image recognition in mobile phones, digital voice assistants, and entertainment platforms, illustrates its worldwide presence.

The Future of AI:

The future of AI holds immense possibilities, foreseen to progress exponentially with increasingly sophisticated systems. However, this trajectory brings forth ethical and societal concerns, particularly in the realms of job displacement and the responsible use of AI, including issues of surveillance and data privacy.

Conclusion:

AI emerges as a transformative technology with both promise and challenges. The exploration of its potential underscores the necessity to establish ethical guidelines for responsible usage. The future of AI extends beyond technological advancement, inviting contemplation on the societal framework we aspire to build.

GOLDEN RATIO (1.618)

The Golden Ratio is a proportion that has come to represent beauty and perfection in mathematics, art, and nature.

The golden ratio is a special ratio between two quantities in which the ratio between the two quantities is equal to the ratio of their sum to the larger of the two quantities.

It is denoted by the Greek numeral Phi (ϕ), is an irrational number.

The golden ratio, also called the golden number, divine proportion, etc., has a very close association with the Fibonacci sequence.

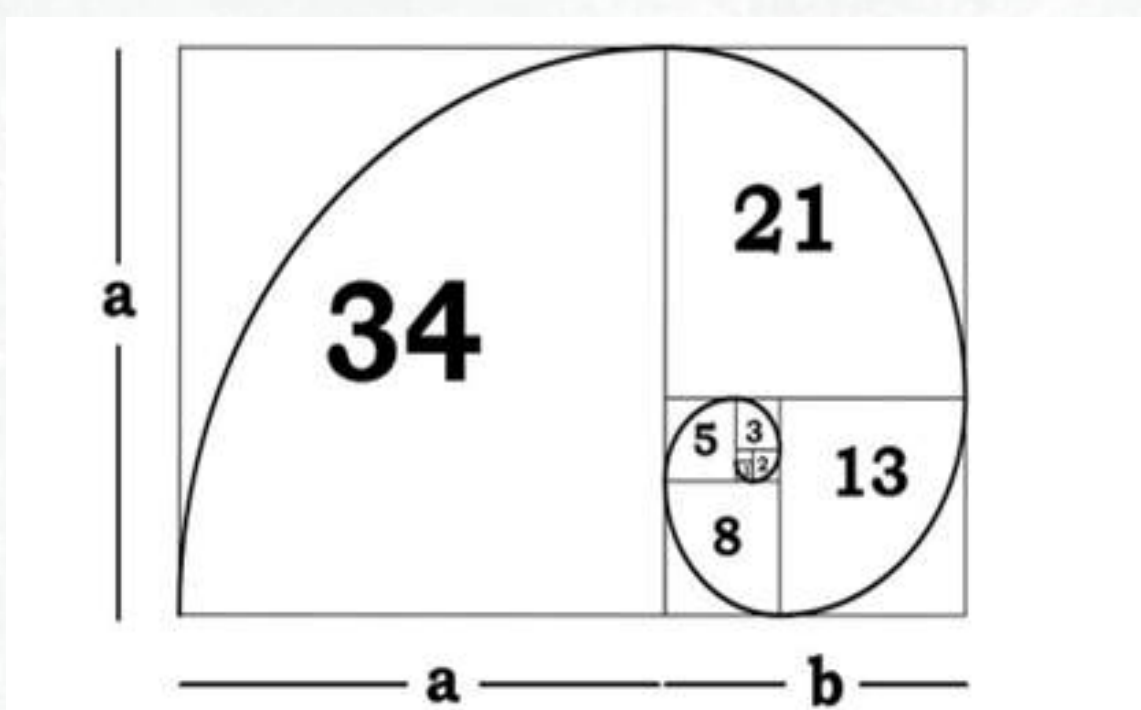
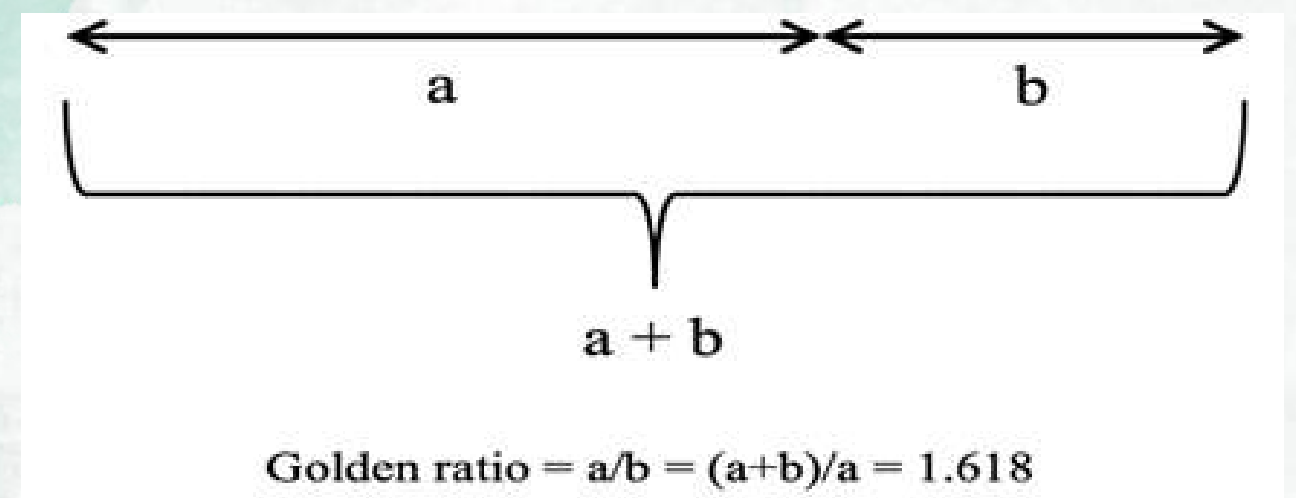
a must be greater than b ($a > b$)

What is the Fibonacci Sequence?

The Fibonacci sequence is a special series of numbers in which every term (starting from the third term) is the sum of its previous two terms.

Fibonacci sequence is thus given as, 0, 1, 1, 2, 3, 5, 8, 13, 21,.. and so on. Fibonacci sequence and golden ratio have a special relationship between them. As we start calculating the ratios of two successive terms in a Fibonacci series, the value of every later ratio gets closer to the accurate value of ϕ (1.618).

For example, The following table shows the values of ratios approaching closer approximation to the value of ϕ . The following table shows the values of ratios approaching closer approximation to the value of ϕ .

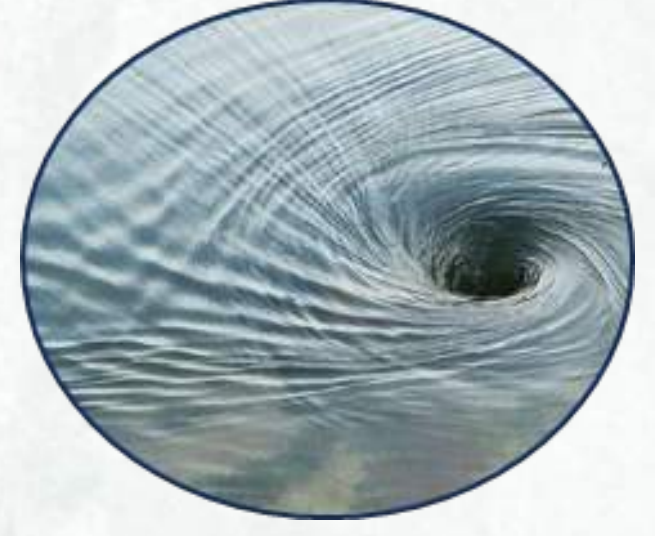
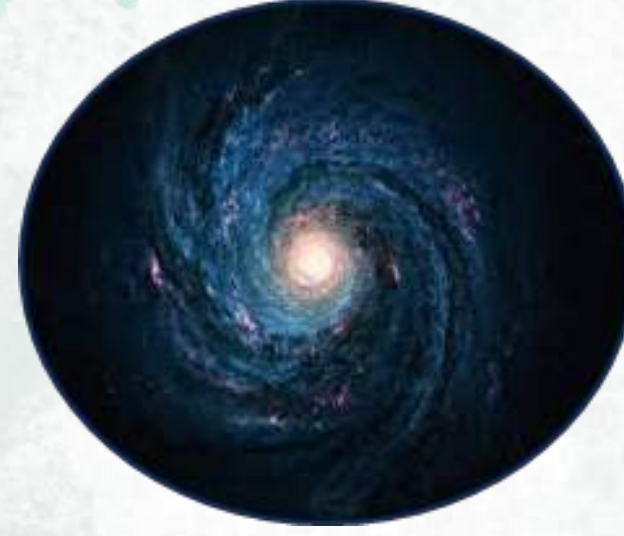
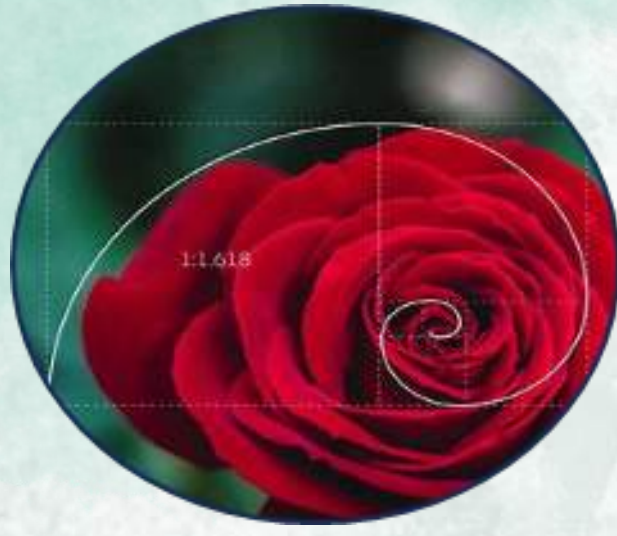


Term 1	Term 2	Ratio=Term2/ Term 1
2	3	1.5
3	5	1.6666..
5	8	1.6
8	13	1.625
13	21	1.61538

Golden ratio applications:



Golden ratio in nature



Sushmitha B
2nd Year MCA

The Tree in Front of My House

Change is an inevitable part of life, that is a known fact. It might not always feel like it, but it is the truth. That being said, there are objects that withstand the flow of time. These objects are all around us. Sometimes we see a tree, or a rock, or even the soil and we wonder, what stories does this hold. What events have they witnessed. I have seen plenty of changes in my life. This is only one of many.

There used to be a tree in front of our building. Even after all these years, I still don't know what tree it was, what species. Just that it was big and it was almost as tall as the building our house was in, which itself had 4 floors. I remember that some of its branches were cut so that it wouldn't snag the electrical wires. If I recall, the tree died by the time I got to the 6th grade. It was cut down a few days before the summer ended. Apart from its stump, which is also slowly disappearing, it never felt like there was ever a tree there. I always wondered what stories the tree held, how old it was, what it has seen and experienced. I wonder if it saw the people who lived in our house before us and that if it recognised them if they came around the neighbourhood once in a while. How many years did it stand there? Was it there even before the neighbourhood was there?

Did anyone who lived in the neighbourhood before we arrived ever visited one day and wonder when the tree was cut down? Looking back, I can't believe how easily we got used to the tree no longer being there. We had seen the same tree there every day for the past 5-6 years. I remember trying to climb it, with no success. I was very young, I quickly stopped trying. I wonder if any of my family ever thought about the tree. I never even thought to ask. I just hope, that if I go back to the neighbourhood several years from now, there will still be some trees there and not stumps that are slowly fading from existence.



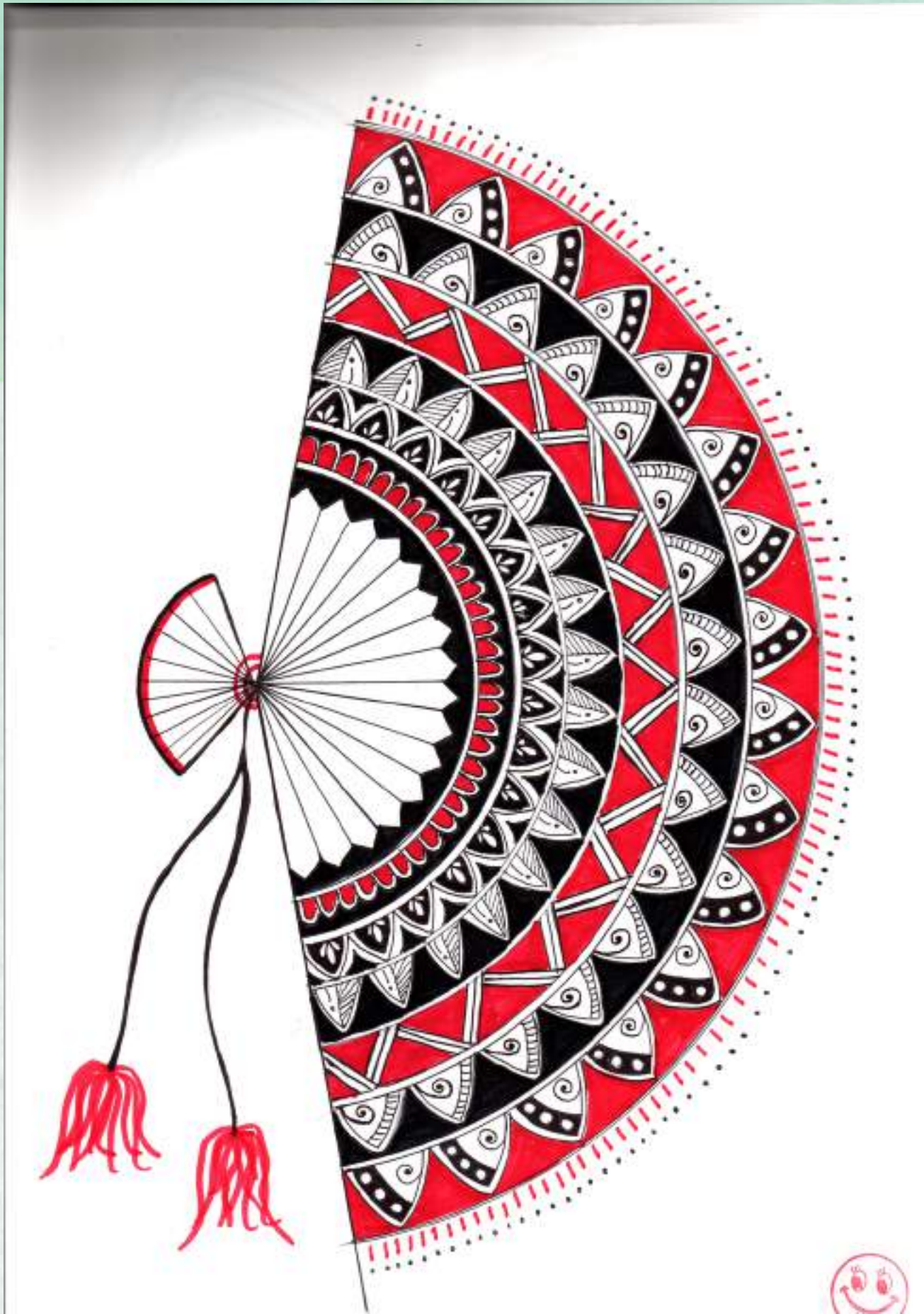
Samahitha K R

2nd Year MCA

Lakshmi H

2nd Year MCA





Yashaswini BS
1st Year MCA

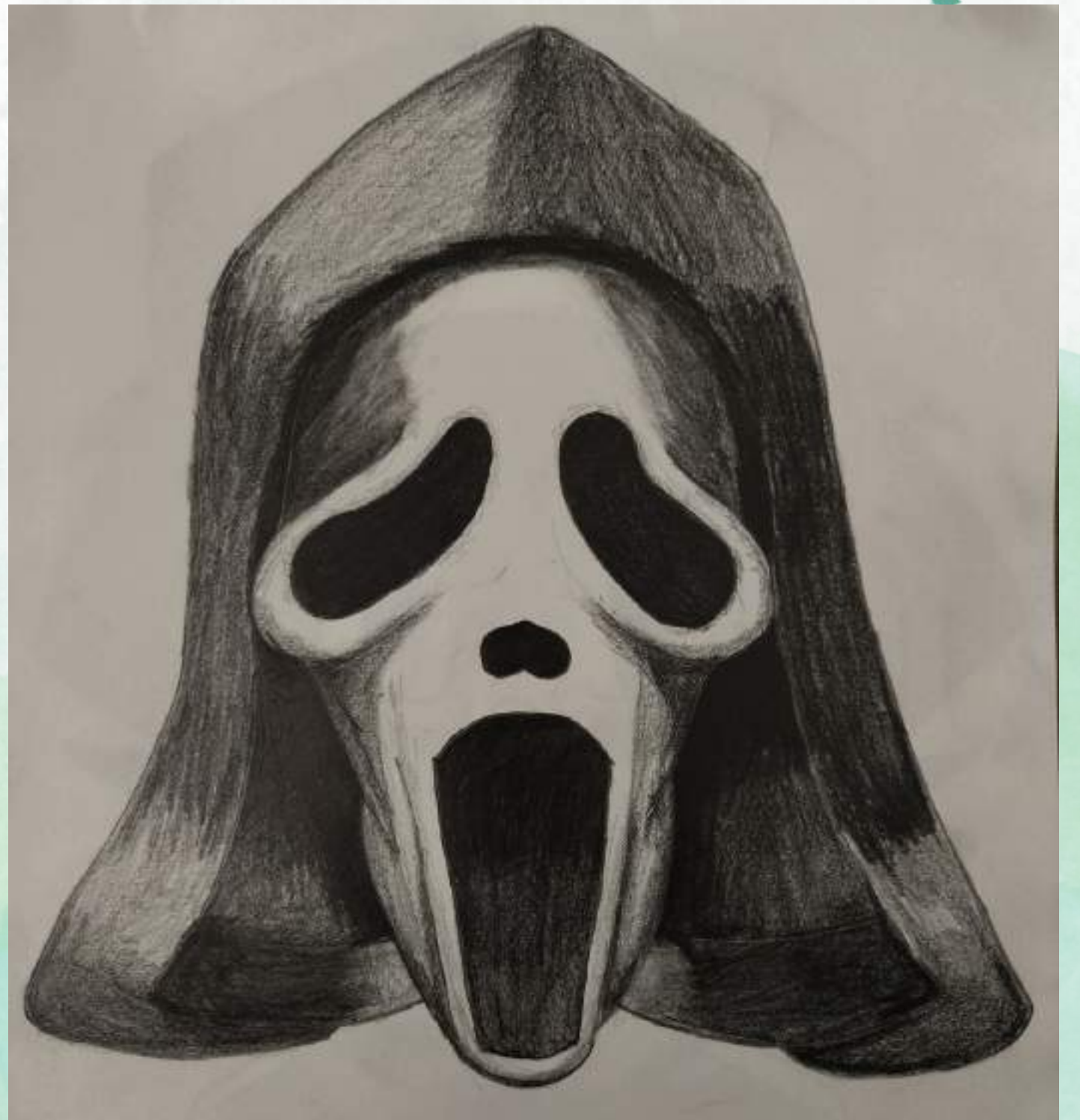
Harshitha CK
2nd Year MCA





Vaneesha KH
2nd Year MCA

Karthik M
1st Year MCA





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CA – 17, Kengeri Satellite Town, Bangalore – 60

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