



RAMAIAH
Institute of Technology

INFORMATION SCIENCE & ENGINEERING

AN INSIGHT INTO THE DEPARTMENT

**VolSE
Magazine
2021-2022**



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PROF. SANJAY H A

**PROFESSOR & HEAD IN THE
DEPARTMENT OF
INFORMATION SCIENCE AND
ENGINEERING**

" Greetings and thank you for reading this issue of Vo'ISE. Vo'ISE is a campus publication run entirely by and for ISE students. More particularly, the diversity of voices found within our department inspires us. We are motivated by the voices of the students. The department's activities and the students' abilities in both technical and non-technical fields will be highlighted in the Vo'ISE newsletter. I thank all the stakeholders on their contribution to the newsletter and the department's achievers on behalf of the department. I would like to thank the Vo'ISE editorial board for their work on this edition of Vo'ISE. "

**HEAD OF
DEPARTMENT**

VolSE: FACULTY COORDINATORS

"VolSE is an opportunity for students and faculty to use this common forum to exchange their innovative idea. Students can develop their multidimensional skills by participating in the departmental activities. "Leadership is an action. It is not a position." In this context, our students are in action as volunteers to this forum and bringing innovation every year in the form of workshops, seminars, technical talks etc. for the growth of overall personality development. We wish all the students to utilize the context of this forum to build a successful career and spread the leadership and entrepreneurship awareness among themselves and juniors."



VolSE is a student forum of the department of Information Science & Engineering which was established in the year 2000. It majorly comprises of the second and third year students who coordinate with faculty and department to carry out various activities and events in our college. VolSE provides an opportunity to the students to improve their leadership skills, and allows them to work as a team which in turn polishes their interpersonal skills and enables the development of their multidimensional skills. VolSE organizes events in association with IEE CIS and Google DSC club. Every year VolSE also releases the department magazine which provides an insight of the department activities and achievements.

VISION & MISSION OF THE INSTITUTION

VISION

To be an Institution of International Eminence, renowned for imparting quality technical education, cutting edge research and innovation to meet global socio-economic needs .

MISSION

M S Ramaiah Institute of Technology shall meet the global socio-economic needs through:

1. Imparting quality technical education by nurturing a conducive learning environment through continuous improvement and customization.
2. Establishing research clusters in emerging areas in collaboration with globally reputed organizations.
3. Establishing innovative skills development, techno-entrepreneurial activities and consultancy for socio-economic needs.

VISION & MISSION OF THE DEPARTMENT

VISION

To evolve as an outstanding education and research center of Information Technology to create high quality Engineering Professionals for the betterment of Society.

MISSION

Department of Information Science and Engineering shall create high quality IT Engineering Professionals for the betterment of society by:

1. Providing education through an ever improving curriculum and effective pedagogy techniques.
2. Encouraging extra and co-curricular activities to develop their overall personality along with technical skills.
3. Collaborating with industry and academia for strengthening research, innovation and entrepreneurship ecosystem.

PROGRAM EDUCATIONAL OBJECTIVES

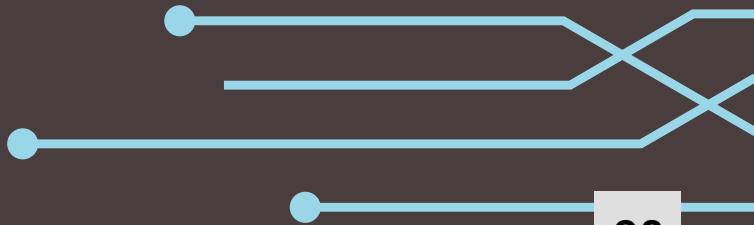
- PEO1: Become competent Information Technology professionals with continuous progress in career or learning
- PEO2: Productively engage with society by practicing research or entrepreneurship.
- PEO3: Function effectively as professionals in a team environment or individually.

PROGRAM SPECIFIC OUTCOMES

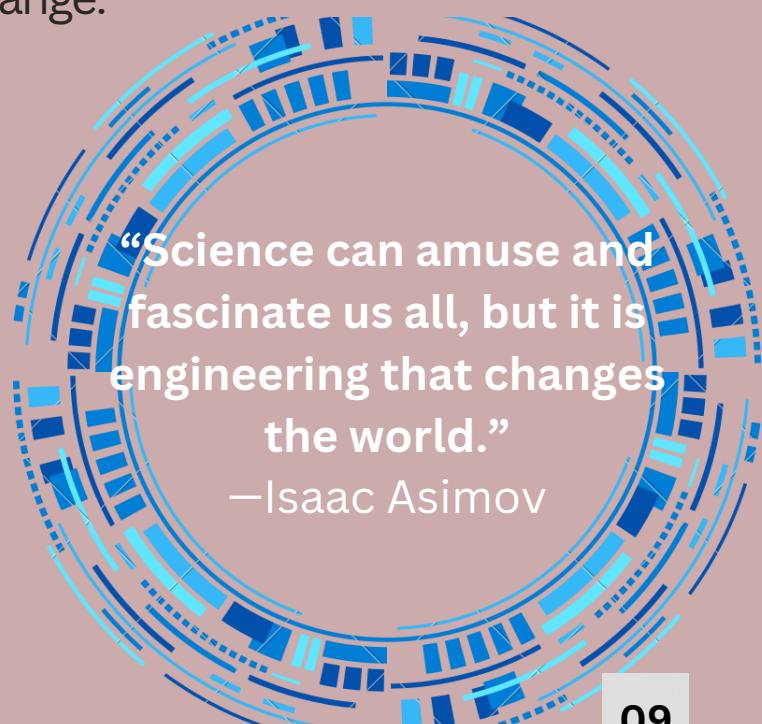
- PSO1: Apply Mathematical models, programming paradigms and software development practices to solve real world problems.
- PSO2: Adopt computing and communication models for developing IT solutions.
- PSO3: Acquire data engineering skills to develop intelligent systems in a multidisciplinary environment.

PROGRAM OUTCOMES

- **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.



- **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



EVENTS

WORKSHOP ON CONCEPTS OF BLOCKCHAIN

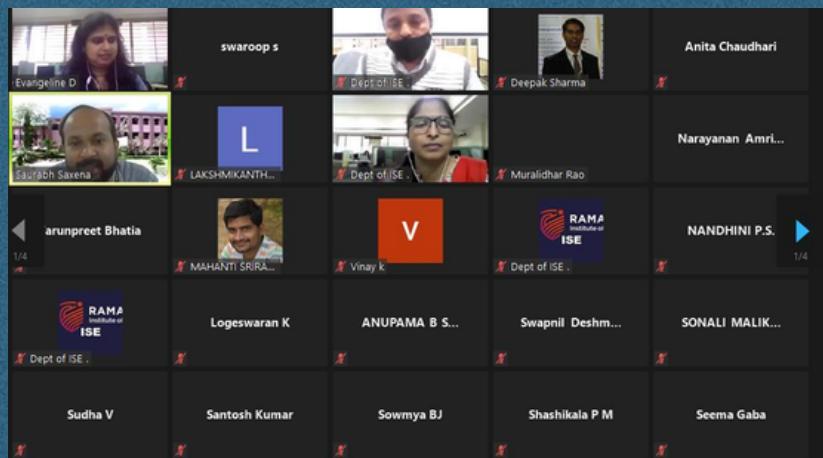
12th July to 16th July 2021

"Blockchain is a shared, immutable ledger that facilitates the process of recording transactions and tracking assets in a business network."



AI/ML 5-Days AICTE sponsored workshop was conducted in which around 200 participants from different parts of the country participated.

The speakers for the 5-day workshop on “PRACTICAL INSIGHT INTO KEY CONCEPTS OF BLOCKCHAIN” were:

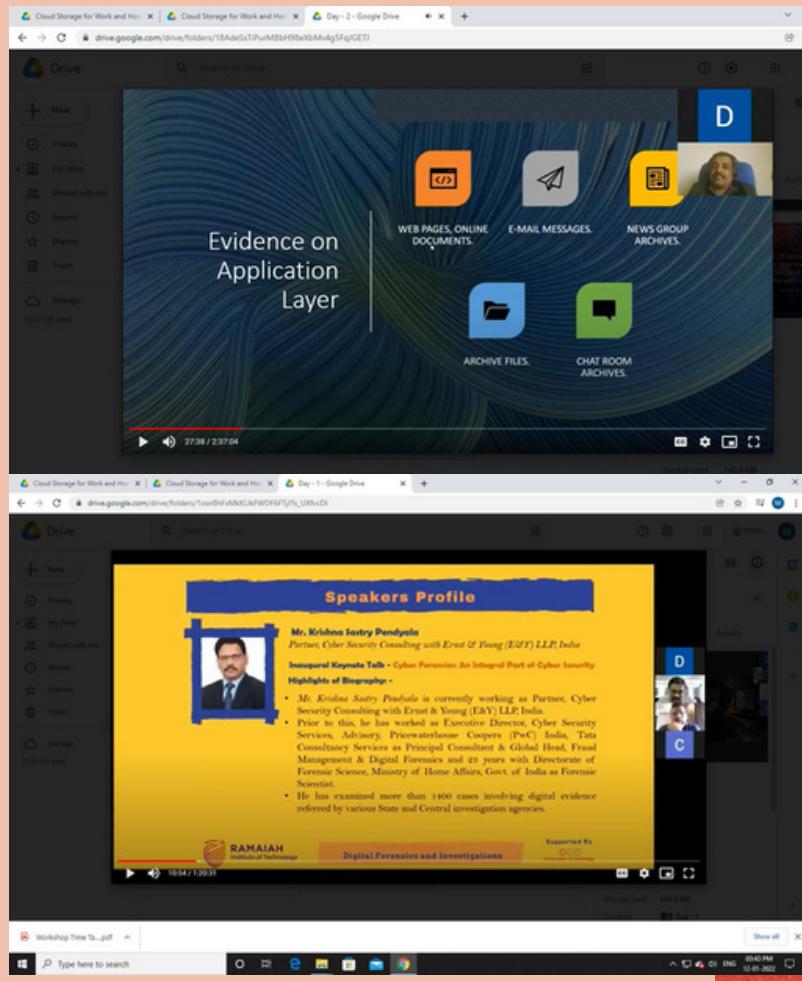


Dr. Vimal Bhatia, Dr. Mydhili K. Nair, Dr. Varun Deshpande , Mr. Hemant H. Kumar ,Mr. Rahul Kamath, Mr. Hemant Joshi, Mr. Aditya Gupta

DIGITAL FORENSICS 2022

9th August to 13th August 2021

Faculty Development Program on “Digital Forensics and investigations”.



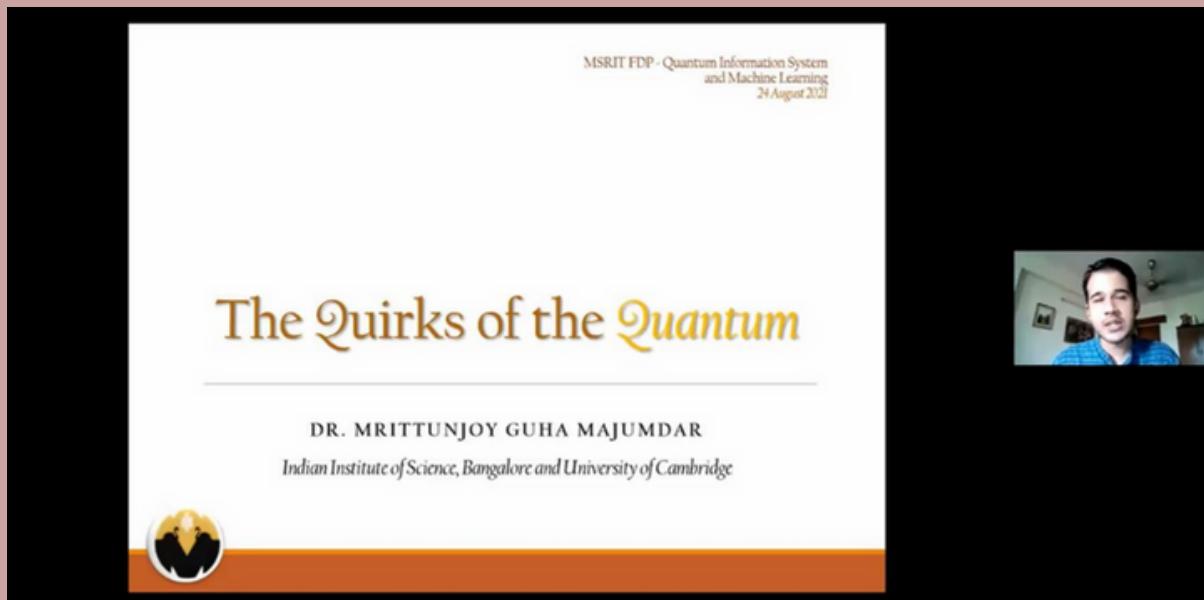
The department of MCA , CSE , and ISE in association with Group Cyber ID organized a 1 week faculty development program on “Digital Forensics & Investigations”. The aim of the workshop was to offer practical illustrations on how evidence can be captured from Computers, Laptops, Mobile Phones and other Electronic Gadgets. It also focused on awareness and knowledge of the nature of computer record evidence in respect of the substantial and procedural issues in legal proceedings.

The Digital Forensics workshop featured in depth multiple lectures from a panel of experienced professionals from industry and academia. The sessions addressed Computer Forensic Process, Cyber Law and Jurisdictional Issue, Indian IT Acts and latest Amendments and Acceptance of Digital Data and Computer Reports as evidence in court, Malware Analysis etc..



QUANTUM INFORMATION SYSTEMS AND MACHINE LEARNING

23rd August to 27th August 2021



The departments of Information Sciences, Computer Science and Master of Computer Applications in collaboration with the IEEE-CIS Bangalore chapter organized a 5 day online FDP on Quantum Information Systems and Machine Learning.

This workshop aimed to foster the interaction from experts among academicians, industrialists and other research institutes that can be related with interdisciplinary topics.

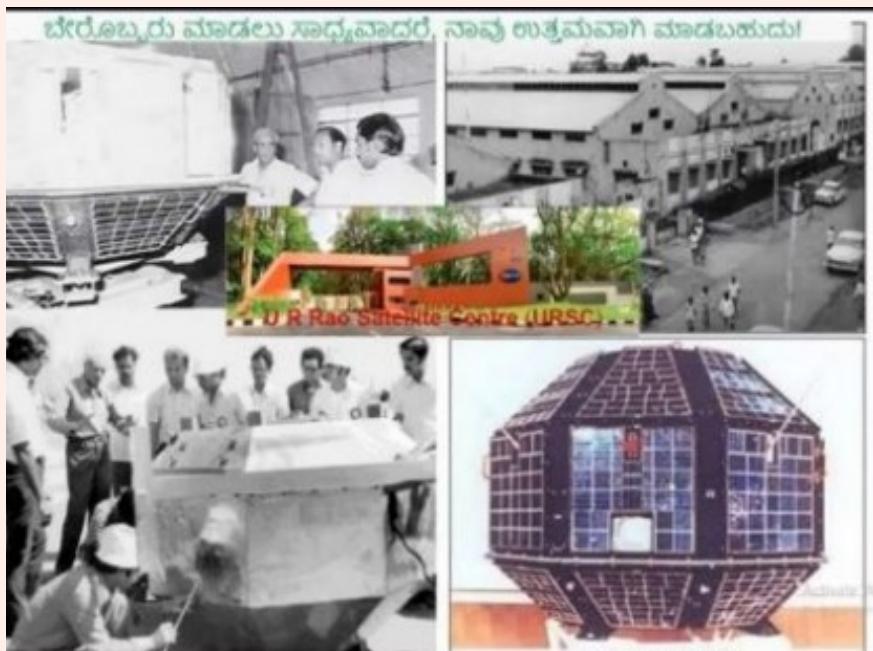
The speakers for the program were:

Dr. B Sathish Babu, Prof S J Krishna Prasad, Dr. Mrinal Shrinivas Moharir, Dr. Mrittunjoy Guha Majumdar, Dr Gururaj , Mr. Sriharsha Bommana, Dr. Vijaya Kumar B , Dr. Ankur Raina, Dr. Tribikram Gupta, Dr. Manjunath T, Mr. Yugesha Aralakuppe Ramegowda, Mr. Karthik V, Dr. Mydhili K Nair, Mr. Hemant H Kumar, Mr. Rajesh K Jeyapaul,

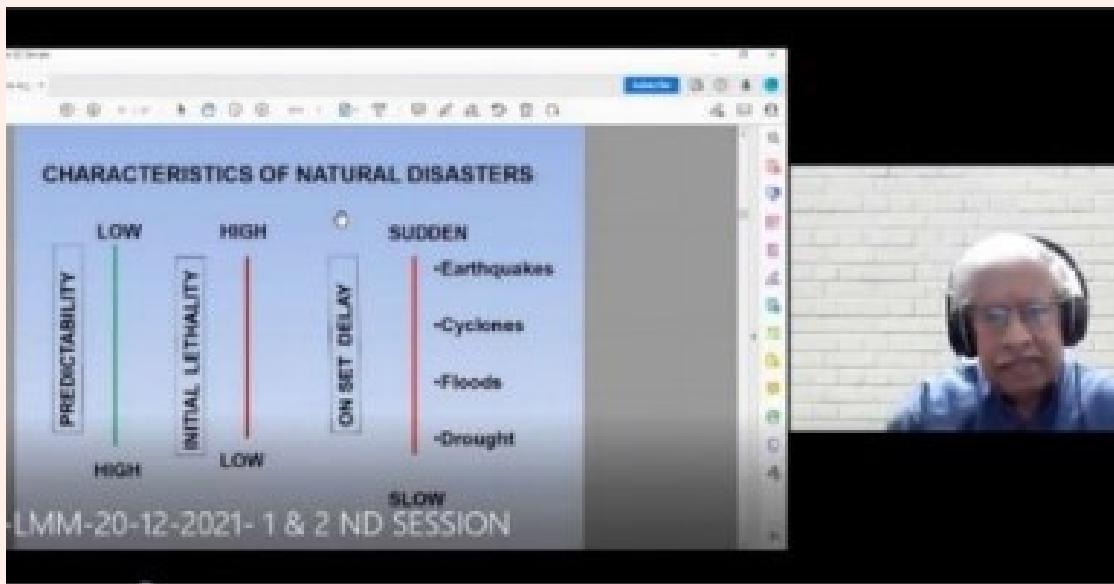
RESEARCH CHALLENGES IN ATMOSPHERE

20th Dec 2021 to 24th Dec 2021

ATAL sponsored workshop on "RESEARCH CHALLENGES IN ATMOSPHERE" was conducted through online mode with speakers from ISRO & DRDO.



The introductory remarks were given by Dr. K. R. Manjunath, which was followed by a session by Dr. B. Manikiam, who is the former Senior Meteorologist in India Meteorological Department, Senior Scientist, Indian Space Research Organization ISRO and former Sir M Viswesvaraya ISRO Professor, Bangalore University, on "Space Applications in Natural Disasters Management."



In the Faculty Development Program (FDP) ,the major topics that were discussed by the guest speakers are as follows :

- . Space applications in Natural Disaster management & Oceanology
- . Applications of space tech in climate studies
- . Agricultural Remote Sensing
- . Monitoring and Forecasting of Tropical cyclones
- . Role of Meteorology in Satellite launch operations
- . Geoinformatics in Environmental management
- . Optical and Radio techniques for Atmospheric Probing
- . Opportunities through ISRO's geportals

INDUSTRY VISIT 5.0

21st to 25th March 2022

The workshop helped the audience to understand and work with the industry 5.0 technology, identify novel research in the key areas of Industry 5.0 and build innovative products as per their standards.



The objectives of the workshop were:

1. To provide awareness of potential technologies and supporting applications of Industry 5.0.
2. To disseminate conceptual methodologies and techniques relating to Intelligent health care, Food processing, Agriculture and Collaborative robots.
3. To highlight research challenges and open issues that could be further developed to realize Industry 5.0.

Amazon Web Services

From 25th - 27th August 2022 & 1st -3rd September, 2022



Speakers: M Siva Rama Krishna and Shaifu Zama Mohammad MEDHA Tech solutions

The FDP provided detailed hands-on sessions on AWS Cloud concepts for around 30 participants. Each topic was thoroughly explained using real-world examples. It began with elasticity, scaling up and down with the café shop as an example. A very simple example to help understand the technology.

DEVELOPER STUDENT CLUB



ANDROID WORKSHOP

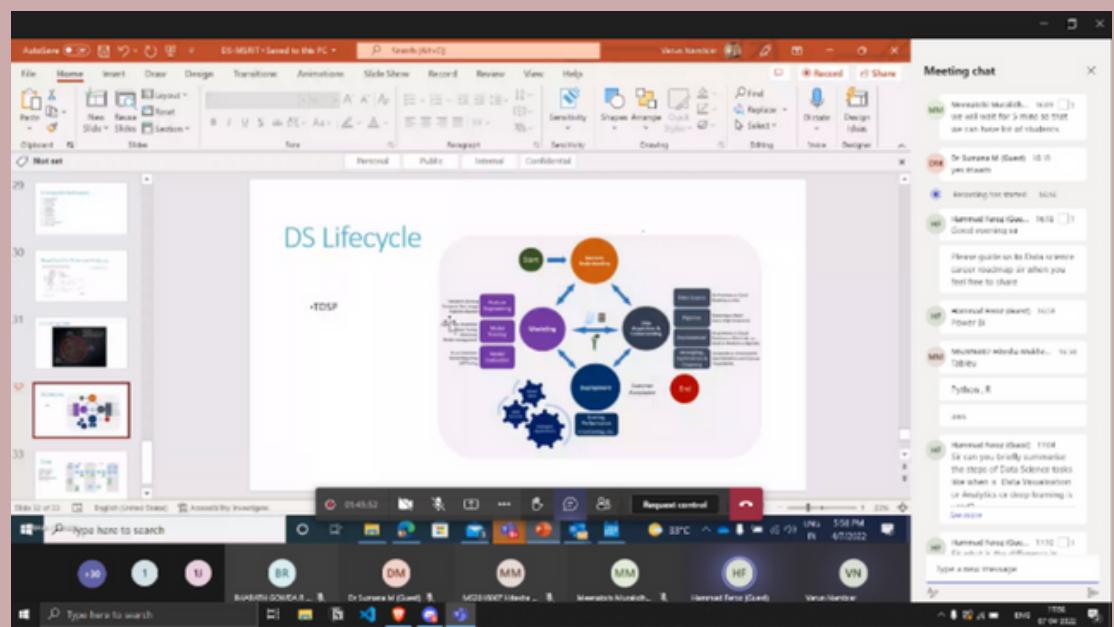


CAPTURE THE FLAG

FEW MORE EVENTS:-



JULIA TRAINING



VOCATIONAL PROGRAMME ON PRACTICAL ASPECTS OF COMPUTATIONAL INTELLEGENCE

DEPARTMENT ACTIVITIES

CONFERENCES HELD IN THE YEAR

2021-2022 - 15

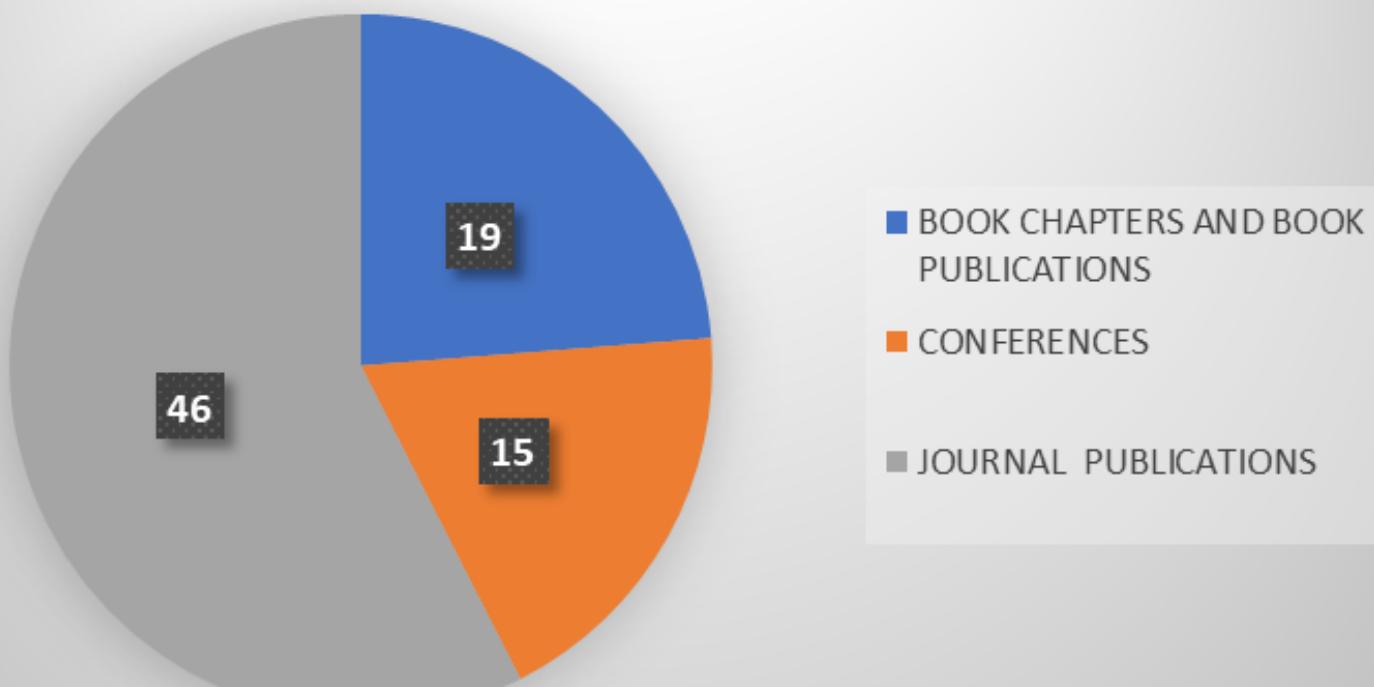
FACULTY PUBLICATIONS IN THE YEAR

2021-2022:

JOURNALS PUBLISHED - 46

BOOK CHAPTERS/ BOOKS PUBLISHED - 19

STATISTICS



EXTRACURRICULAR

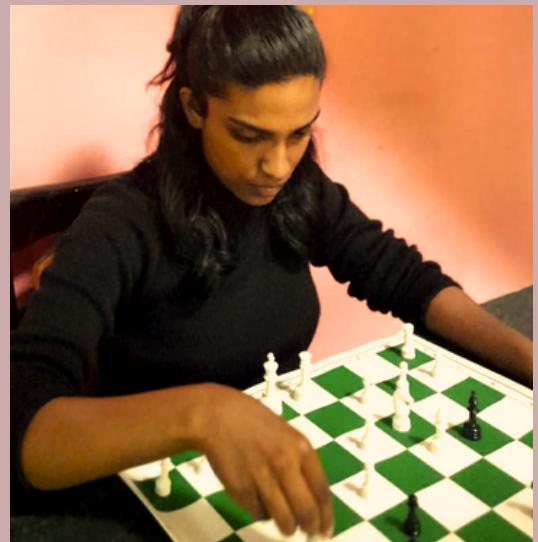
- Jayant S Sogikar(1MS19IS051), Nandan R Herekar(1MS19IS076) 7th Sem, won Rs 1 lakh prize amount in Smart India Hackathon NIT Silchar Assam 25/08/2022 to 26/08/2022 (National level-1st place)
- Gaurav Gupta(1MS19IS040) 7th Sem won Rs 5000 prize amount in UVCE IEE startup solution Bangalore 13/08/2022 to 14/08/2022 (State level-2nd place)
- Anusha Chaturvedi(1MS19IS021), Ankita M Thakur(1MS19IS018), Himanshu Behl(1MS19IS046) Brihadeesh R K(1MS19IS030), Benny Nandha Dharshan G(1MS19IS028) 7th Sem, won Rs 75,000 prize amount in Smart India Hackathon, Maharashtra institute of technology, Aurangabad 25/08/2022-26/08/2022 (National Level-2nd place)
- Anusha Chaturvedi(1MS19IS021), Ankita M Thakur(1MS19IS018), Himanshu Behl (1MS19IS046) & Benny Nandha Dharshan G (1MS19IS028) 7th Sem, won Rs 25,000 prize amount in Devpost (online) PowerToFly global hackathon, 25/06/2022-26/06/2022 (National level-1st place)
- Anusha Chaturvedi(1MS19IS021), Benny Nandha Dharshan G (1MS19IS028) 7th Sem, won Rs 12,000 prize amount in Dayananda Sagar College of Engineering, 04/06/2022-05/06/2022 (State level-2nd place)
- Rohan Kumar Shetty(1MS19IS01), Vinay K (1MS19IS39) 7th Sem, won Rs 5000 prize amount in C-Dac Bengaluru 11/06/2022 - 12/06/2022 (State level-1st place)
- Rohan Kumar Shetty (1MS19IS01), Pavana HA (1MS19IS98), Vinay K (1MS19IS39) 7th Sem, won Rs 50,000 prize amount in Virtual Hackathon JSSIT 22/06/2022 - 24/06/2022a (State level-2nd place)
- Rohan Kumar Shetty (1MS19IS01), Vinay K (1MS19IS39) 7th Sem, won Rs 12,000 prize amount in AI ML project showcase, Ramaiah Institute of Technology 11/06/2022 (college level)
- Jayesh Goyal(1MS19IS052) 7th sem, won Rs 1 lakh prize amount in Smart India Hackathon, SCMS Cochin, Kochi 25/08/2022 - 26/08/2022 (National level-1st place)
- Rohan Kumar Shetty (1MS19IS01), Vinay K (1MS19IS39) 7th Sem, won Rs 500 in Ramaiah Institute of Technology Ideathon 02/06/2022 (college level-2nd place)
- Chandana T (IMS19IS033), Brinda S(IMS19IS031) 7th Sem, won Rs 12,000 prize amount in AI ML project showcase, Ramaiah Institute of Technology 11/06/2022 (college level)
- Tirtharaj Sengupta(1MS19IS133), Tarun Krishnan(1MS19IS132) 7th Sem, won Rs 1 lakh prize amount in Smart India Hackathon, Wellingkar Institute of Management Studies Bombay 25/08/2022 - 26/08/2022 (National level- 1st place)
- Sushanth Bhat(1MS19IS124) 7th Sem, won in IEEE COSMOC Bangalore Success Deck 23/09/21 - 26/09/21 (state level-1st place)
- Tirtharaj Sengupta(1MS19IS133) 7th sem, won Rs 1.5 lakh prize amount in Rakuten India (online) 22/07/22 -23/07/22(National level-3rd place)

CO-CURRICULAR ACTIVITIES & STUDENT AWARDS

SPORTS

Bhavitha Reddy (1MS19IS130)

- Chess – Inter zone Tournament, 1St Prize (State level)
- VTU Tournament 2021 -2022, Winner Interzone
- BMSCE Tournament, Kreedotsav – 2021, 1st Place
- Inter-collegiate zonal tournament 2022, 1st Place



Diya James (1MS20IS044)

- Chess – Inter zone Tournament, 1St Prize (State level)
- VTU Tournament 2021 -2022, Winners Interzone
- BMSCE Tournament, Kreedotsav – 2021, 1st Place
- Winners at VTU Inter zone/ State level Chess Tournament at NITTE, Mangalore

Aditi Kailas (1MS20IS006)

- Karnataka State Rifle Association, 2nd place (State level).
- 64th National shooting Championship, 2nd position in 10m Rifle (ISSF) Women Championship (Foreign National) Individual.
- 64th National shooting Championship, 2nd position in 10m Rifle (ISSF) Junior Women Championship (Foreign National) Individual.
- Kumara Surendra Singh Memorial Shooting Championship (National level), 2nd position in 10m Rifle Women - ISSF (Foreign National) individual event.
- Kumara Surendra Singh Memorial Shooting Championship (National level), 2nd position in 10m Rifle Junior Women- ISSF (Foreign National) individual event





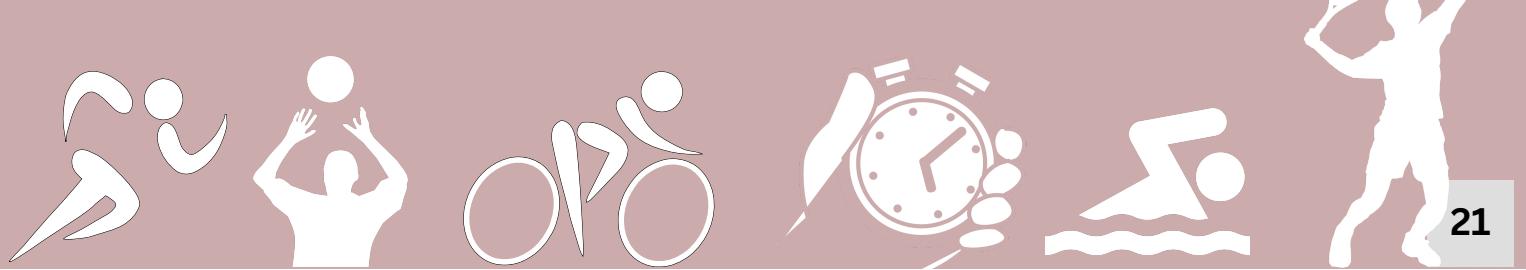
Winners Of Kabaddi Intra College Competition (ISE TEAM)



Neralkar Yash Nitin (1MS21IS067), MSRIT
Cricket team player.



Shivam Shivaji Nesarikar (1MS20IS409)
MSRIT Cricket team player.



TECHNICAL

- Raghav Maheshwari, Tanisha Sabherwal, 2nd Runner up, awarded \$3500 in RAPID – A global Open API Challenge Virtual Event 2021 (International Level)
- Sushanth Bhat, Success Deck, First prize in IEEE COSMOC 2021 (International Level)
- Anusha Chaturvedi, Benny Nandha Dharshan G, Ankita M Thakur, Qualified for Level 2 in Flipkart Grid 4.0 2022 (National Level).
- Rohan Kumar Shetty, Vinay K, Pavana H A, 2nd prize in 48-hour Virtual Hackathon, Hackwell 4.0 2022 (State Level).
- Rohan Kumar Shetty, Vinay K, Pavana H A, Consolation prize of Rs. 5000 in Go AI for social good Hackathon 2022 (National Level).
- Anusha Chaturvedi, Benny Nandha, Dharshan G, Ankita M Thakur, Himanshu Behl Winners at PowerToFly Global Hackathon 2022 (National Level).
- Anusha Chaturvedi, Benny Nandha, Dharshan G secured 2nd place in Nokia Hackman V 5.0.4.6, 2022 (State Level).
- Jayant Sogikar, Nandan Kerekar, 1st place, awarded Rs. 5000 in Matlab Hackathon 2022 (National Level).



Smart India Hackathon 2022
1st Runner up



UNESCO India Africa Hackathon 2022
Winner



Smart India Hackathon 2022
Winner

COMMUNITY OUTREACH

SEVERAL ISE STUDENTS OF THIRD YEAR TOOK PART IN COMMUNITY OUTREACH ACTIVITIES, WITH THE AIM TO GIVE BACK TO SOCIETY. THESE STUDENTS WENT TO DIFFERENT SCHOOLS AND SHARED THEIR KNOWLEDGE AND CREATIVE IDEAS WITH THE CHILDREN THERE, ENGAGING THEM IN FUN BRAINSTORMING ACTIVITIES.



PLACEMENT GUIDE



I MUNI SAI HANEESH
SWE Intern at Fivetran

Advice corner for placements

Few highlights from the interview:

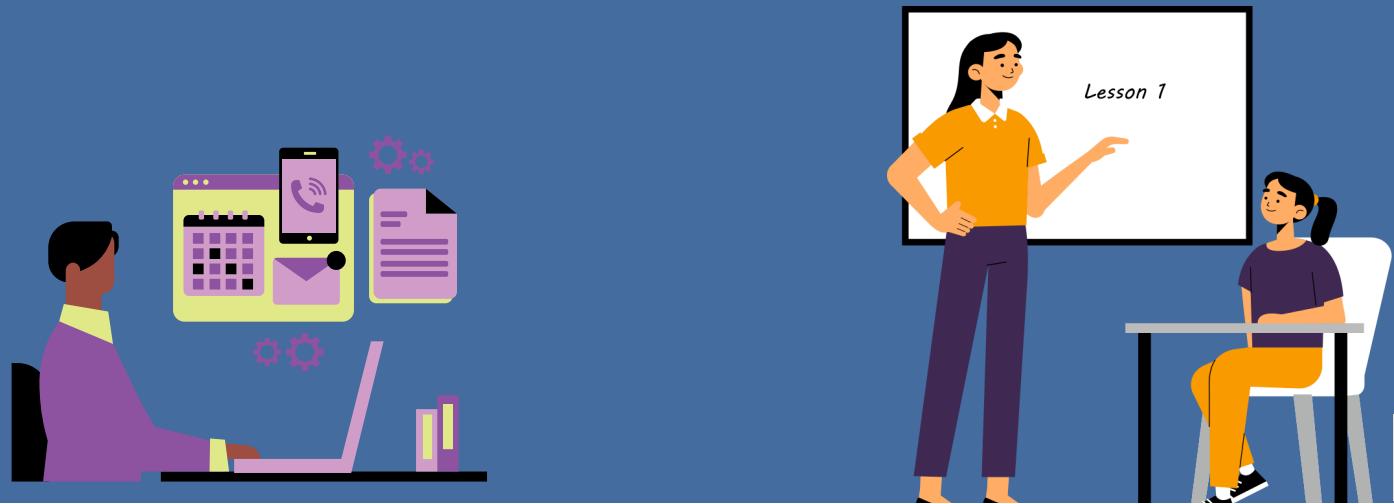
1. Have a good hold on DSA, practice questions from HackerRank, LeetCode. Sometimes you might feel stuck but go through the solutions only after trying your best. Have a learning approach.
2. If you are able to solve medium level questions and identify the approach to hard level questions, then you can crack most of the interviews.
3. Do not neglect subjects like DBMS, OOPs, System design in college.
4. Muni Sai Haneesh attended one of the GDSC organized Machine-Learning workshop which motivated him to work on projects. It later helped him stand out of the crowd.
5. Haneesh participated in a few Hackathons, was one of the finalist in SIH'22, despite not winning he constantly pursued his interests and focused on problem-solving.
6. Department and faculty are of great support and provided valuable information related to placement tests, so listening to them is crucial.

Tips on writing a resume:

1. Have a CV of maximum 1 page and Include GitHub/Live links to your projects.
2. Never lie on your resume, be thorough with whatever is there in your CV, especially internships and projects.
3. Highlight your contributions and align your resume based on your strengths and interests.

General Fundaes:

1. Build 2-3 strong projects that you can explain top to bottom. Focus on your contribution in the project and results. Be strong with fundamentals in whatever profile you're applying to.
2. Never assume things, do attend the pre-placement talks seriously and contact placement department for any doubts.
3. Work on creative projects, try building something cross-platform and learning the latest technologies like Machine learning, mobile app development, any field that grabs your interest.
4. Take the opportunity, prepare for it and crack it.



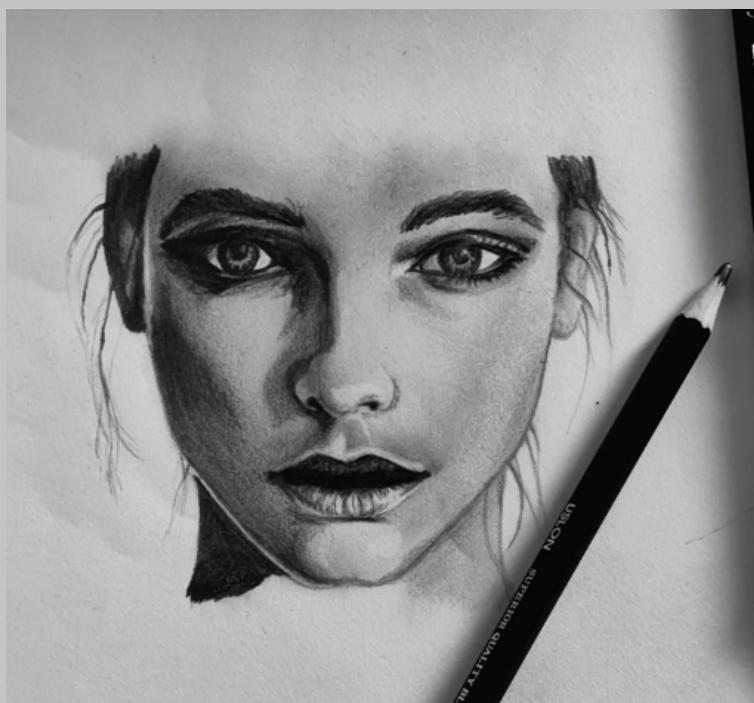
CREATIVITY CORNER



Anagha Kalyani
USN: 1MS20IS146



Prapti Bopana
USN: 1M20IS088

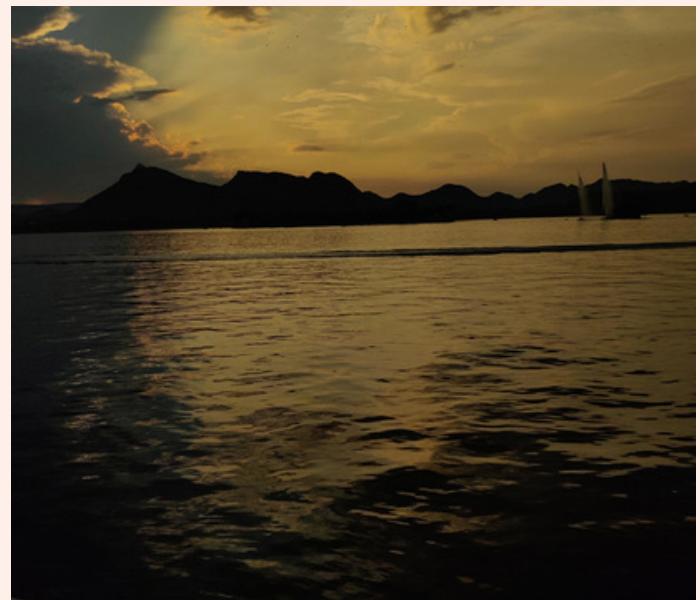


Aarohi Jain
USN: 1MS21IS003

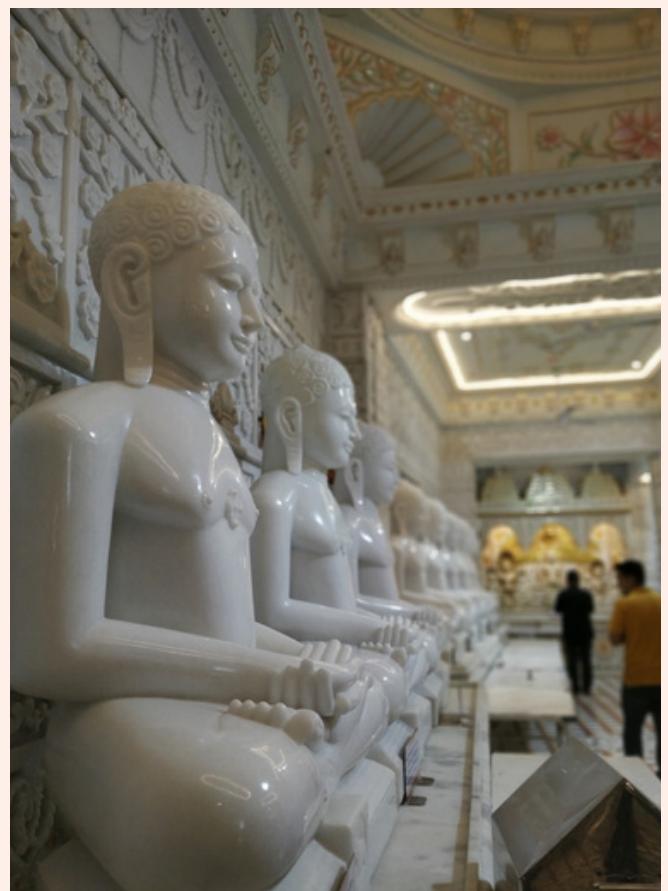
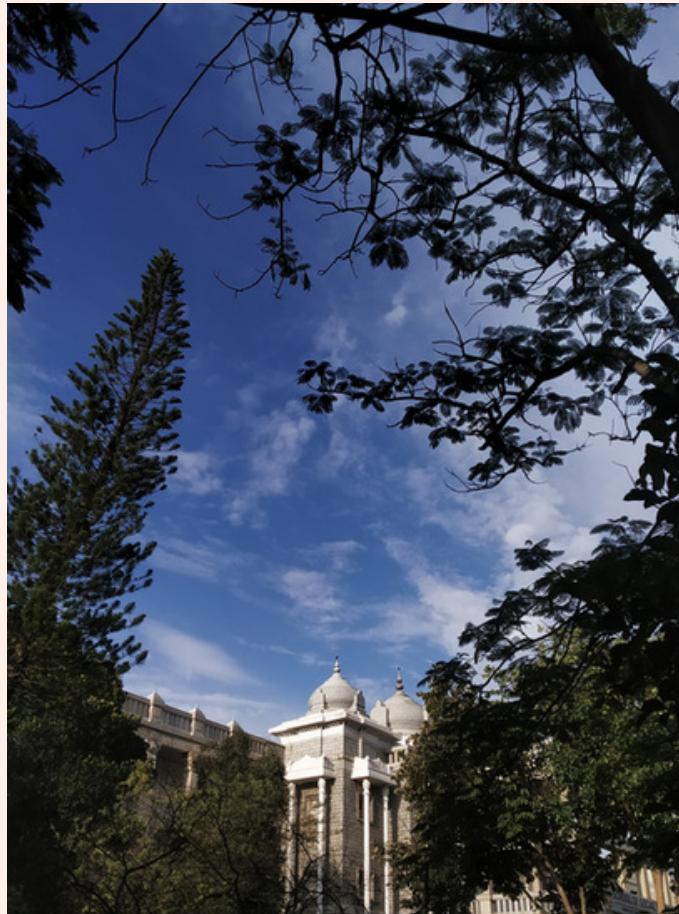


Anushka Gupta
USN: 1MS20IS143

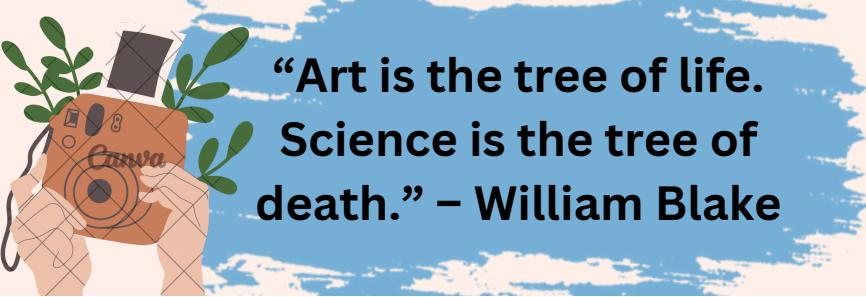




Aditya Chordia
USN: 1MS21IS008



Sanidhya Jain
1MS20IS104



TOP 17 NEW TECHNOLOGY TRENDS FOR 2023

Technology today is evolving at a rapid pace, enabling faster change and progress, causing an acceleration of the rate of change. IT professionals in 2023-24 will constantly have to be learning, unlearning, and relearning.

Here are the top 17 emerging technology trends you should watch for and make an attempt at in 2023:

- 1. Computing Power**
- 2. Smarter Devices**
- 3. Datafication**
- 4. Artificial Intelligence and Machine Learning**
- 5. Extended Reality**
- 6. Digital Trust**
- 7. 3D Printing**
- 8. Genomics**
- 9. New Energy Solutions**
- 10. Robotic Process Automation (RPA)**
- 11. Edge Computing**
- 12. Quantum Computing**
- 13. Virtual Reality and Augmented Reality**
- 14. Blockchain**
- 15. Internet of Things (IoT)**
- 16. 5G**
- 17. Cyber Security**

-By Nikita Duggal

FAREWELL

Of our 2022 Batch



EDITORIAL TEAM

FACULTY COORDINATORS

LINCY MEERA MATHEWS

PRASHANTH KAMBLI

STUDENT COORDINATORS

AAROHI JAIN (1MS21IS003)

ADITYA CHORDIA (1MS21IS008)

ADITYA RAUT (1MS21IS011)

ESHAAN H. RAO (1MS21IS036)



On behalf of the department of information Science and Engineering , the editorial team thanks the Head of the department , professors , faculty , staff, and students for all the support and encouragement to bring out the magazine for the year 2021-2022.



Dr. M.S. Ramaiah, FIAE
(1922 -- 1997)
“A True Karma Yogi”