# DATA

# CHRONICLE

**OFFICIAL NEWSLETTER** 

DATA SCIENCE AND BUSINESS SYSTEMS

SCHOOL OF COMPUTING
SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
KATTANKULATHUR











#### Game Technology Themed Edition

"The intelligent man is one who has successfully fulfilled many accomplishments, and is yet willing to learn more." — Ed Parker

#### EDITORIAL MESSAGE

Dear Postulants.

It's time to warm up and recall our last quarter's events and achievements, we focused upon. This is the inimitable voice of the department which is unifying, defiant and inspiring. Covered with chill and cool climates, we entered in to the hot weather of Chennai and jumped in to terrifying events with innovative minds at the back end. Copious and freak incidents happened academically, innovatively and in the research front along with Pongal celebrations, women's day functions, Alumni day carnivals, culturals, hackathons, Competitions, contests, project expos, patent publishing and granting and what not....

As, Chickens are behaviourally sophisticated, discriminating among individuals, exhibiting Machiavellian-like social interactions, and learning socially in complex ways that are similar to humans, we also exhibit the same to be united to all sorts of people one way or the other to get connected with rural and urban population and took technology down the lane. Through our societal interactions we had interventions among our students without discriminations, and made them to respect elders as African elephants respect their female elders. By defining ourselves, our success, and our "try and do" trials without even knowing the results at the end of our research, we appreciate the freedom and the enthusiasm provided by our higher authorities towards our department. The Head and the senior professors are extending their support among our faculty like Meerkats use teamwork to lead their life. We learnt from study that chickens are intelligent and emotional animals, and are able to "demonstrate thinking skills on par with mammals and primates". If you hide an object from a chicken, they will still know it's there, Hope we will inculcate the excellent habits of animals as many algorithms have been developed by scientists in Machine Learning and Deep Learning, and will try to implement our students' hidden potentials to limelight. The Indian Data Analytics industry is predicted to escalate to USD 98 billion in 2025 and nearly USD 119 billion in 2026. Hope to meet you in the Next Edition! Stay Tuned!! Expect the Unexpected!!!

> Dr. B. Amutha SCO - Newsletter - Head

#### **Editor in Chief**



Dr. B. Amutha NEWSLETTER - HEAD SCHOOL OF COMPUTING

#### **Advisor**



Dr. M. Lakshmi HoD - DSRS





Dr. K. Shantha Kumari **Quality Head** 



Dr. R. Rajkumar Design Head



Dr. P. Saravann **Content Head** 



Dr. Elangovan **Content Editor** 



Dr. Shobana **Content Editor** 



- Computer game impacts on computing
- ICRTDA- 2023 Conference
- Pre Conference workshop
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- Workshop on EdTech Tools
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- Notable Achievements
- Faculty Publications
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- Faculty upskilling
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- Student Achievements
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- Department clubs
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Evolution of Video Games





### How computer games impact on computing

Computer games have played a significant role in the evolution of AI (Artificial Intelligence) over the years. AI in games can be defined as the development of intelligent agents that can perform tasks

As computer technology improved, game developers began to create games that could be played on home computers. Early examples include games like "Pong" and "Space Invaders," which were released in the mid-1970s.

In the 1980s, video game consoles like the Atari 2600 and the Nintendo Entertainment System (NES) became popular, making it easier for people to play games at home. These consoles were designed to be affordable and easy to use, and they quickly became a staple of many households.

Throughout the 1990s and 2000s, video game technology continued to evolve rapidly. New consoles like the PlayStation and the Xbox were released, and the internet made it possible for people to play games online and connect with other gamers from around the world.

Today, video games are a multi-billion dollar industry, and game technology continues to push the boundaries of what is possible. From virtual reality to augmented reality to cloud gaming, the future of gaming looks very exciting indeed.



1960s, a number of computer games were created for mainframe and minicomputer systems



30 & 31, March 2023

Convenors: Dr. T. Karthick, Dr. P. Rajasekar, Dr. M. Sangeetha, Dr. K. Priyadarsini



The International Conference on Recent Trends in Data Science and its Applications (ICRTDA) was organized by the Department of Data Science and Business Systems under School of Computing at SRM Institute of Science and Technology, Kattankulathur Chennai. The International Conference held for two days on March 30 and 31, 2023.



The Chief guest DRDO Scientist Shri. S. Veerasekar, Additional Director, IT and Robotics, Combat Vehicles Research and Development Establishment, inaugurated the International conference by releasing the conference proceedings. He suggested students to involve themselves in military related research.

30 & 31, March 2023



This conference brings together researchers, academicians, and industry professionals to share their knowledge and expertise in Data science and its applications across various domains. The conference has received 514 paper submissions and attracted a diverse group of participants, including researchers, academicians, and industry professionals from various countries like USA, Egypt, Malaysia, Nigeria, Saudi Arabia, South Africa, Taiwan, Turkey, Vietnam, Maldives, Bangladesh and Indonesia. The collection of papers reflects the latest research and advancements in data science and its applications. The International Conference on recent trends in Data Science and its applications plays a pivotal step in converging all technological and research advancements in Data Science at SRMIST

Professor Raghavendra Jana from Russia, Professor Maxim Tyan from South Korea, Professor Sam Gounder from Australia were invited to give plenary talks.



30 & 31, March 2023



## Technical addresses delivered by **Eminent Academicians and Researchers**



Speaker Details		Plenary and Keynote Address Theme
Prof. Maxim Tyan	Konkuk University, South Korea	Air Space Modelling
Prof. Sam Goundar	RMIT,Australia	Data Science and the Future trends
Prof. Raghavendra Jana	SKOLTECH, Russia	Envirotyping - Smart Agro Industry
Dr. Ayyappan GS	CSIR-CSIO	Control monitoring using Big Data Analytics
Dr. Masilamani.V	IITDM, Kancheepuram	Generative AI MODEL
Dr. P.Thiyagarajan	RGINYD, Gout. of India	Natural Language Processing - Research Prespectives
Dr. Santhosh Satish	DHL - Manager of teams	Machine learning in logistics
Dr. S. Venkatesan	IIIT Allahabad	Block chain and its application
Dr. Aruna Tiwari	IIT Indore	Data Science - Researcher's bird view
Dr. Debajyoti Mondal	University of Saskatchewan, Canada	Visualizing Spatial Data with Mixed Numeric, Categorical, and Temporal Attributes
Dr. Gan Hong Seng	Xi'an Jiao tong -Liverpool University, China	Deep Learning for Medical Image Analysis: From Past to Present
Dr. Anand Jeyaraj	Wright State University, USA	Handling Generative AI Technologies in Business and Society
Dr. Gautam Srivastava	Brandon University, Canada.	Federated Learning for Data Privacy
Dr.Kuruna Kumari	Industry Expert- Great Learning Mentor	Advance visualization using Tableaue







#### 30 & 31, March 2023

Day 1 is graced by the Plenary talks by Prof. Maxim Tyan and Prof. Sam Goundar, followed by the Keynote address from Dr. Ayyappan, Senior Principal Scientist, CSIR-CSIO and Ms. Karuna Kumari, Industrial expert from Great learning. Second day of the conference includes the plenary talk of Prof. Raguendra Jana from Skoltech, Russia, and Keynote addresses by Prof. Masilamani, Head, Department of Computer Science and Engineering, Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram. Dr. Thyagarajan, Professor, Rajiv Gandhi National Institute of Youth Development, Sriprembathur and Dr. Santhosh Satish, Director of DHL, Chennai.

Several International and National academicians including Dr. Debajyoti Mondal, University of Saskatchewan, Canada, Dr. Gan Hong Seng, School of Al & Advanced Computing, Xi'an Jiaotong - Liverpool University, China, Dr. Anand Jeyaraj, Wright State University, USA, Dr. Gautam Srivastava, Brandon University, Canada, Dr. S. Venkatesan, Indian Institute of Information Technology, Allahabad, and Dr. Aruna Tiwari, Professor, Department of Computer Science and Engineering, Indian Institute of Technology, Indore joined the conference virtually to deliver their expert talks.



The conference validatory ceremony is graced by the august presence of SRMIST research dean Dr. Neppolian as chief guest and this added significant value to the event. His speech was inspiring as he pointed the recognition to the research achievements by the students and faculty in SRMIST and encouraged everyone to win for it.

In his closing remarks, the research dean congratulated the students and faculty for their hard work and achievements. He urged them to continue to strive for excellence and to use their knowledge and skills to make a positive impact on society. He also emphasized the need for collaboration between academia and industry to bring about innovations that would benefit society.





30 & 31, March 2023

# Pre - Conference WORKSHOP

Convenors: Dr.V. Kavitha, Dr. N. Parthiban



Geospatial datasets represent features related to the earth, and their various relationships and variations. Spatial data analysis is the set of techniques used to extract patterns, anomalies, and other underlying information from the (geo)spatial datasets. In this workshop, we will take a first dip into exploring some public geospatial datasets from different sources, mainly satellite remote sensing. After an introduction to the different kinds of spatial data, participants will go through a hands-on session on accessing remote sensing datasets from NASA and the European Space Agency, extracting data for specific regions, visualizing them on maps, and extracting information relevant to the problems at hand. We will be considering use cases such as vegetation health analysis, flood mapping, drought monitoring, and urban expansion. The analyses will be carried out using the web interface of the Google Earth Engine (GEE) repository. Basic programming familiarity is expected. The workshop will be conducted using JavaScript, the preferred language for the GEE interface.

30&31, March 2023



The cultural event that was honored by the Director of International Relations Dr.Lakshmi Narasimhan. The event was a celebration of the rich cultural heritage of great India. The event showcased traditional music, dance, and art and was a testament to the conference's commitment to diversity. The Director's presence added to the significance of the occasion, and his address emphasized the importance of cultural diversity and the need to preserve and promote cultural heritage. The prizes presented to the performers was a fitting tribute to their efforts in promoting cultural diversity and creating an inclusive environment.





# **SCAN**

Video of the cultural performance by children



30 & 31, March 2023



### National workshop on Gamification using EdTech Tools

#### 23-24, March 2023

Convenor Dr.M.Lakshmi Coordinator Dr.R. Rajkumar

The two days national workshop on "Gamification using EdTech Tools" featuring esteemed speakers Mr. Jainareesh, Ms. Grace Janavi, and Ms. Prizilla. The workshop was held at India - Taiwan BDA Lab. University Building.







Mr. Jainareesh, an expert in educational technology who is working in HP. He discussed the fundamentals of gamification. He showcased some of the popular edtech tools that can help educators create engaging and immersive learning experiences. Ms. Grace Janavi, an award-winning educator and gamification specialist, shared her experiences in gamifying the classroom and the positive impact it has had on student engagement and achievement.

"Gamification provides fun tools for micromanagement"

Ms. Prizilla, a leading developer of educational games and simulations, presented some of her latest creations and how they can be integrated into the curriculum. She discussed the benefits of game-based learning and how it can foster critical thinking, problem-solving, and creativity among students. The two days workshop was well received by the participants from various institutions.

# National workshop on Gamification using EdTech Tools

### 23-24, March 2023

















Convenor Dr. M.Lakshmi and Overall Coordinators Dr. T. Veeramakali, Dr. T. Karthick



Tech Vistara, a flagship school outreach programme from the Department of Data Science and Business Systems (DSBS), School of Computing aimed at introducing school children to the competitions, latest technology and innovations in SRMIST.

The event, held at SRM Kattankulathur Campus, featured competitions like interactive Quiz, Coding, Web design, Poster design, and Oratorial in Tamil and English. Overall 520+ school children from various schools participated. Mrs. S. Bhuvaneswari, Principal, SRM Public School is the chief guest for the inaugural of Tech Vistara. In her talk, she encouraged the students to take Tech Vistara at SRM as a valuable learning experience and to carry back what they learned to the school community. Dr. Revathi Venkataraman, Chairperson, School of Computing emphasized the need for student-centered learning and the ways in which emerging technology can support school education. Dr. M. Lakshmi, Head of the Department, DSBS appreciated the young students for making use of the event for updating their knowledge. The children, who came from various schools all over the city, were given the opportunity to participate in multiple events and learn about cutting-edge technologies such as artificial intelligence, Robotics, and Gaming Technology

# TECH VISTARA GAME ON











The day ended with the valedictory function in which the winners and the participants are appreciated for their efforts. Dr. M.S. Lakshmi, Director, Directorate of Admissions, SRMIST graced the event as chief guest and distributed the certificates and cash prizes to the students. The winners got cash prizes worth Rs.30,000. Students from Immanuel Matric Hr. Secondary School, Pattabiram has got several prizes in various competitions and received the overall winner trophy of Tech Vistara. The Runner trophy was awarded to St. Joseph's Higher secondary school, Maraimalainagar. The overall feedback from the young minds and teachers reflected their excitement to know that technology can be both fun and interesting. The event was well organized by Dr. T. Karthick and Dr. T. Veeramakali with the support of all faculties of DSBS, School of Computing, SRMIST.





# INTERNATIONAL OUTREACH TECH VISTARA

After the successful execution of the Tech Vistara in regional level, an International Tech Vistara executed on 28th January 2023 collaboration with Directorate of International Relations (DIR), SRMIST. DSBS Head of the Department Dr. M. Lakshmi given welcome address. School of Computing chairperson Dr. Revathi Venkataraman given inaugural address. IR Director Dr. Lakshmi Narasimhan given presentational address. International guests were invited from Australia to give keynote address on STEM Labs. The quiz winners honoured with certificates. School students from southeast countries and African continents registered for various events in International Tech Vistara in virtual mode. Institutions are follows.

- 1. The Asian School, Bahrain
- 2. Gss kwata zawan, Nigeria
- 3. Lovely Professional University, Syria
- 4. ISWK, Oman
- 5. Federal university Birnin Kebbi, Nigeria
- 6. Indian school Al Wadi Al Kabir, Muscat
- 7. International Indian School Dammam, Saudi Arabia
- 8. Indian School Muscat, Oman
- 9. Silvermount, Bahrain
- 10. The Indian School, Kingdom of Bahrain, Bahrain
- 11. Al Noor International School, Bahrain
- 12. International Indian school Al Jubail, Bahrain
- 13. Ryan international school, Sharjah, United Arab Emirates







# Alumni connect Tech Talk on Data Analytics Tools

Guest Speaker: Dhanya Sasikumar

Batch : M.Tech [ IT] - 2020

Current Profile: Data Scientist, Barclays

Talk: Jan 31, 2023 - Online Mode

Dhanya gave a wonderful session on the tools that are related to the data science field. She also brushed upon the framework related to data science and machine learning like Hadoop, TensorFlow and Deep Learning. The students were able to acquire knowledge about the road map ahead of them.

Event Coordinators: Dr. K. Sornalakshmi and Ms.R.Radha



### Navigating the Business World: Startups to Global Opportunities

Guest Speaker: Monesh

Batch: B.Tech [CSE] - 2020

Current Profile: ModeX Digital, Founder

Talk: Feb 2, 2023 - Direct address

The Speaker of the session enlightened the pros and cons of becoming an entrepreneur. The speaker inspired the students with his interaction and the success path of his professional life by establishing a firm. Students got sufficient knowledge related to basic principles and terms related to establishing a startup like seed investing, angel investor etc.

Event Coordinators: Dr. Rajeswari D and Ms. R. Radha



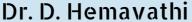






# **Congratulations on your Job Promotion**









Dr. T.Karthick

Hope this promotion to Associate Professor brings all kinds of new challenges & opportunities to raise you above and above

# **Welcome to DSBS Family**



Dr. D.Prabakar



Dr. M.Rajakani



Dr.M. Mercy Theresa



Dr. M.Arthy



Dr.A.Sasikumar



Dr.B.Yasotha



Dr. V. Vijayalakshmi

"Martin Luther King Jr. once said, "Take the first step in faith. You don't have to see the whole staircase, just take the first step."

Congratulations on the first step by joining our DSBS Family Looking forward to work with your thoughts and ideas.

Welcome to the team.

# **FACULTY**



# NOTABLE ACHIEVEMENTS

### **SERB International Travel Support**

Dr. D. Rajeswari
International Travel Support(ITS)
Science and Engineering Research Board (SERB)
2023 - 33rd Annual POMS Annual Conference,
Orlando, FL, USA
21 May, 2023 to 25 May, 2023
Support for Airfare, Visa processing etc.,





#### **IEEE EPICS USA - FUNDING**

Dr. R. Rajkumar

IEEE - EPICS Funding worth \$ 1610

Community project for hearing impairment children

March 2023



Dr. B. Prabhu Kavin

An Enhanced CNN Model for Motor Imagery-based Brain-Computer Interface
Best paper award with Cash prize: 500 AED
3RD International Conference on Computational

Intelligence and Knowledge Economy, ICCIKE 2023, March 9, 2023, Amity University, Dubai





# Gold Medal @ Research Day

Dr. R. Anita Jasmine
R-LC Extraction and Classification Using DL Approach
Research Day, SRMIST
February 28, 2023





# SCI Publications

**Dr.Paul T Sheeba** - A novel approach of tool condition monitoring in sustainable machining of Ni alloy with transfer learning models, *Journal of Intelligent Manufacturing* [IF:7.136]

Dr. Prabhu kavin B, Dr. Jeeva- APESTNet with Mask R-CNN for Liver Tumor Segmentation and Classification, *Cancers* [IF:6.575]

**Dr. Kalpana A V**, Glioma brain tumor detection using dual convolutional neural networks and histogram density segmentation algorithm, *Biomedical Signal Processing and Control* [IF:5.076]

**Dr Jeba Sonia J**, Machine-Learning-Based Diabetes Mellitus Risk Prediction Using Multi-Layer Neural Network No-Prop Algorithm, *Diagnostics* [IF: 3.992]

**Dr.Sornalakshmi K,Dr.G.Vadivu** - An empirical analysis of stateful operator migration for online scheduling in distributed stream processing systems, *Microprocessors and Microsystems* [IF:3.503]

**Dr.A.Chinnasamy**-Ruppert's delaunay triangulation refinement scheme for optimal RSUs placement in vehicle to infrastructure communication network, *China communication* [IF:3.17]

**Dr. Prabhu kavin B** -A Trust-Based Secure Neuro Fuzzy Clustering Technique for Mobile Ad Hoc Networks, Electronics [IF:2.69]

**Dr. Prabhu kavin B** -Filter-Based Ensemble Feature Selection and Deep Learning Model for Intrusion Detection in Cloud Computing, Electronics [IF:2.69]

**Dr. Jeeva** - Cryptographic Encryption and Optimization for Internet of Things Based Medical Image Security, Electronics [IF:2.69]

**Dr. S. Ganesh Kumar** -Privacy-preserving data transfer in a blockchain-based commercial real estate platform using random address generation mechanism, Journal of Super Computing [IF:2.557]







# SCI Publications

**Dr.N.Manikandan** - HFTO: Hybrid Firebug Tunicate Optimizer for Fault Tolerance and Dynamic Task Scheduling in Cloud Computing, Wireless Personal Communications [IF:2.017]

**Dr.N.Manikandan** - An Efficient Task Scheduling Based on Hybrid Bird Swarm Flow Directional Model in Cloud Computing Environment, IETE Journal of Research [IF:1.887]

# SCOPUS Publications

- **Dr. Sornalakshmi K** Question Answering System using NLP and BERT, IEEE Conference Proceedings
- **Dr. Priyadarsini K** Emulating SoCs for Accelerating Pre-Si Validation, Cognitive Science and Technology
- **Dr. D. Hemavathi, Dr. S.Srividhya** Fire Detection System using Deep Learning Techniques, IEEE Conference Proceedings
- **Dr. D. Hemavathi** Blockchain and IoT's role in Agri Food Supply Chain Traceability, IEEE Conference Proceedings
- **Dr. D. Rajeswari** A Systematic Method of Stroke Prediction Model based on Big Data and Machine Learning, IEEE Digital explore
- **Dr. D. Rajeswari** Basketball Win Percentage Prediction using Ensemble-based Machine Learning, IEEE digital explore.
- **Dr. A. Shanthini** A Cascaded Feature Extraction for Diagnosis of Ovarian Cancer in CT Images, International Journal of Advanced Computer Science and Applications
- **Dr. K. Shantha Kumari** Optimal Design of Damping Control of Oscillations in Power System Using Power System Stabilizers with Novel Improved BBO Algorithm, Indonesian Journal of Electrical Engineering and Informatics (IJEEI)





# SCOPUS Publications

**Dr Jeba Sonia J** - AI Techniques for Efficient Healthcare Systems in ECG Wave Based Cardiac Disease Detection by High Performance Modelling, International Journal of Communication Networks and Information Security

**Dr. Sivakumar**, **Dr Shobana** J - Emoji Anticipation and Prediction Using Deep Neural Network Model, 2022 IEEE-International Conference on Power, Energy, Control and Transmission Systems (ICPECTS)

**Dr.** Hemavathi. **D** - Agro-Food Supply Chain Traceability using Blockchain and IPFS, International Journal of Advanced Computer Science and Applications

**Dr. Hemavathi. D** - Diabetic Retinopathy Detection Through Feature Aggregated Generative Adversarial Network, IEEE xplore

**Dr. D. Rajeswari** - Efficient allocation of independent gridlet on small, medium, and large grid, Personal and Ubiquitous Computing

**Dr. Sangeetha. M** - Energy Efficient Routing Scheme for Performance Enhancement of MANET Through Dominating Set, International Journal of Interactive Mobile Technologies

**Dr. D. Rajeswari** - Deriving Pipeline for Emergency Services Using Natural Language Processing Techniques, Lecture Notes in Networks and Systems

**Dr. K.Shantha Kumari** - Neural Text Style Transfer with Custom Language Styles for Personalized Communication Systems, IEEE Xplore

**Dr.Shanthini A** - Leaf Diseases Identification and Classification of Self-Collected Dataset on Groundnut Crop using Progressive Convolutional Neural Network (PGCNN), International Journal of Advanced Computer Science and Applications

**Dr. Sangeetha. M** - Detection and Classification of Skin Cancer by Using a Parallel Deconvolutional Network Model,1st IEEE International Interdisciplinary Humanitarian Conference for Sustainability, IIHC 2022.

**Dr. S.Sindhu** - Part-Based Convolutional Neural Network and Dual Interactive Wasserstein Generative Adversarial Networks for Landmark Detection and Localization of Autonomous Robots in Outdoor Environment, IEEE xplore

**Dr.T.Veeramakali** - Machine Learning Heart Disease Prediction Using KNN and RTC Algorithm,IEEE Xplore





# **PATENTS**

**Dr. N. Manikandan**, IOT based smart irrigation systems, Controller General of Patents, Designs and Trade Marks

Dr. T. Nadana Ravishankar, IOT Enabled Service Robot for Isolation Ward IPR, India

Dr. A. Shobana Devi, A LI\_FI printer system, IPR, India

Dr. Shanthini A, Device to detect Ovarian cancer, IPR, India

Dr. Rajasekar P, IOT Based Automatic Vehicle Accident Detection and Rescue System, IPR, India

**Dr. Shobana J**, Method for predictive load balancing in cloud services, IPR, India.

Dr. R. Rajkumar, A System for Optimizing Data and Links on A Product Content Distributed over a Communication Network, IPR, India

Dr. P. Kanmani, Voice Powered Animal Monitoring System using IOT,IPR, India





# **Extension Activities**

### **Award of Post Doctoral Fellowship**

**Dr. M. Sangeetha** is awarded to pursue Post doctoral fellowship remotely at Department of Business administration, Oakland University, Rochester, MI, USA for a time period of two years [2023 - 2024]

**Dr. T. Karthick** is awarded to pursue Post doctoral fellowship at Department of Business administration, Oakland University, Rochester, MI, USA for a time period of a time period of two years [2023 - 2024]

### Resource persons and other notable mentions

**Dr. R. Rajkumar** participated on a live debate on On-line rummy game at Puthiyahthalaimurai TV on 25-03-2023.

**Dr. K. Priyadarsini,** Technical talk on Algo dexterity, Sathyabama Institute of Science and Technology, 13-03-2023 to 17-3-2023

**Dr.T.Veeramakali**, Guest lecture on "Compiler Design" through online mode Department of Computer Science Engineering, Mailam Engineering College, Mailam, 01-04-2023

**Dr. P.C.Karthik**, Techical talk on "Introduction to Quantum Computing", Qkrishi Quantum Computation for Managers, 01-03-2023.

**Dr. R. Rajkumar** Elected as Secretary for IET LN (TN, AP & Telungana States) from January 2023.

**Dr. R. Rajkumar** Delivered expert talk on Metaverse to Velammal Institute of Technology on 07-02-2023.

**Dr. R. Rajkumar** Delivered expert talk on Web 3.0 for Industry 5.0 to B. S. Abdur Rahman Crescent Institute of Science and Technology on 28-02-2023.

# Workshops attended

#### Dr P.C.Karthik

- Attended the Regional Pitch in the BOEING BUILD start up conducted at IIT Madras Research Park Taramani.
- Took part in SRM Campus Hackathon Phase 2 conducted by SIIC SRMIST on 09-03-2023 to 10-03-2023





# Upskilling Activities Workshops/FDPs attended / Certifications

### Completion of Universal Human Values - 1

Dr. V. Vijayalakshmi Dr.G.Premalatha

Dr. S.Sharanya Dr.D.Prabakar

Dr. M. Prakash Dr. M.Sangeetha

Dr.T.Veeramakali Dr. Paul T Sheeba

Dr. M. MERCY THERESA Dr.P.Rajasekar

Dr. Arthy M Dr. C. Tamizhselvan

Mrs S.Sindhu Dr. M.Rajakani

Dr. S.Srividhya Dr. K.S.Archana

Dr. Arunsundar B Dr. Sasikumar A

## **Certifications Completed and other publications**

**Dr. K. Priyadarsini,** Cloud Computing and Distributed Systems - NPTEL - AICTE, FDP and Course certification with ELITE Rank

**Dr. Paul T.Sheeba,** Enterprise Design Thinking Practitioner, IBM Certifications

Dr. P.C. Karthik, Dr. T. Veeramakali, Mrs. R. Radha, Dr. S. Sharanya
Dr. A. Shobanadevi - Effective Teaching of Theory of Computation, CSEDU course - Certified with excellent performance

Dr. P.C.Karthik, Introduction to Quantum Computing, Udemy Certification

Dr. D. Rajeswari, Essential Design principles course, Coursera Certification

**Dr. D.Rajeswari**, Relational Database Design Course, Coursera Certification.

**Dr. R. Rajkumar** completed course on "IPR and Patent Drafting" by CII - Chennai during February 2023.

**Dr. R. Rajkumar** article "India's Satellite Technology" was broadcasted in All India Radio on 19th March 2023.



# Students Achievements

# IRONMAN 70.3

#### **Anirudh Badiga**

(RA2011027010043-V2 Section III Year)
World Triathlon Corporation (WTC)

National Level : First Place International Level : 13th place under the age group of 18-24 .

Place: PHILIPPINES,DAVAO Date: 26th March 2023

Faculty Advisor: Dr. Veeramakali T











#### Harish Kumar TG

RA2011051010049

2nd place in Tamilnadu state sports karate championship conducted by (Tska- Tamilnadu sports karate -Do association) at monfort school, chennai on February 4th, 2023.

Faculty Advisor: Dr.A V. Kalpana

#### MIT QUANTUM HACKATHON

# iQu HACK

#### Abhinav Rajeev Kumar

RA2211050010016 - AC-2

IonQ Remote Challenge ,January 27th-29th, 2023

Interdisciplinary Quantum HACKathon

Massachusetts Institute of Technology, USA

3rd Prize [International level]

Solution: https://github.com/iQuHACK/

2023\_lonQ\_Remote

Faculty Advisor: Dr. Manikandan N



### Rasesh Gowtham

RA2111042010047- AC-1

SONY

Yuru Musical Instruments Hackathon 2023" utilizing SPRESENSE™ in India

Organized by SONY

3rd Prize [International level]

March 11-12, 2023

Faculty Advisor: Dr Jeba Sonia .J





# Students Achievements

HARSH SRIVASTAVA RA2111050010046 - Z1

Ethereum Hackathon , Devfolio 300 \$ worth Prizes [International level]

Feb 4 - 20, 2023

Faculty Advisor: Dr M.Rajakani













**ISHA**RA2111027010181 - Z2

SRMMOZOHACK, SRMKZILLA First Prize

Feb 24, 2023

Faculty Advisor: Dr. Anita Jasmine R

PRADYUMN PRAKASH SRIVASTAVA RA2111027010146 - Z2

SRMMOZOHACK, SRMKZILLA
Project Expo 2023 - Computing Technology
Participation Recognition

Feb 24, 2023 and March 23, 2023 Faculty Advisor: Dr.Ramprasath M







SIDHARTH KOTHARI V RA2011051010043 - X1

C++ Programming for Unreal Game development, Coursera Course completion

Faculty Advisor: Dr.A.V.Kalpana

**SHOVIT JHA** RA2011051010033 - X1

Inducted as a student member of INAE.

Faculty Advisor: Mrs. Sindhu





# CONVULENT

### 27th Feb TO 6th March, 2023

## 6 Days Blockchain Technology Hands-on and Tech-talk

Day 1: Sreyom and Aditya - "Intro to Web3"

Ashok Bharat - "Distributed Databases"

Day 2: Shansundar - "Relayers and Smart Contract", Biconomy
Suraj Venkat - "Router protocol Cross-chain communication", Router Protocol

Day 3: Rohan Sharan - "Bitcoin SV and Smart Contracts", 5ire Chain
Prateek Dwivedi, Lukasz Orlowski, Kishan Verma and Shubham Gupta
- "Rust Tutorial, Smart Contract Deployment, ESG Scores and Sustainable development through 5ire"

Day 4: Vishal - "Solidity and Advanced Defi", Hotwire Systems

Day 5: Viral Sangani - "App Dev in Web3", Celo

Day 6: Shivam Sharma - "Zero knowledge Proof", Polygon ZK













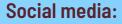
# Clubs in DSBS

# DSBS Students Association

President: Chandresh Kanyal, RA2111027010069

Technical Board Members: Ashwanth Godfrey, RA2112704010020 Yasir Tawfiq, RA2112704010016

Treasurer Board Member: Rohith Rajesh , RA2111042010039



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Contact: +91 9967756859, Chandresh Kanyal, President, DSBS Association

# Data Science Club



President & Founder: Vidushi Gupta [RA2111051010046]

Board Members: Sathvik Natarajan [RA2111027010059] Bandlamudi Amulya Grace [RA2111027010064]

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**Bandlamudi Amulya Grace** 

# Blockchain Club

President - Aditya Jain [RA2011050010028 ]

Vice President - Sreyom Sresaan [RA2011003010054],

Sarvottam Kumar Mishra [RA2011003010863]

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Crypto - Pranay Goenka [RA2011003010027],

Yash khandelwal [RA2011050010012]

Operations Lead - Ayushya Jain [RA2011003010010], Yuvraj Patel [RA2011050010078]

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Operations/Editorial Lead - Lakshmi Vibha [RA2011042010039],

Saatvik Yadav[RA2011050010066]

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in Linkedin: https://www.linkedin.com/company/blockchain-club-srm/

Instagram:https://instagram.com/blockchainsrm?igshid=ZDdkNTZiNTM=

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# Gaming Developers Community



President: Antony Sam Jaiton [RA2111051010046]

Technical Board Member: Rupan Nag [RA2111051010052]

#### Social media:

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Instagram:@gamedevcom.srm

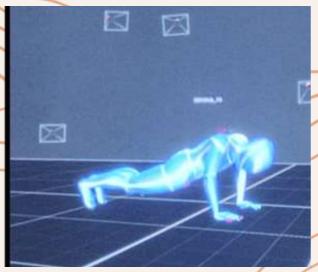
Contact:+91 9524225599, Antony Sam Jaiton, President, GDC

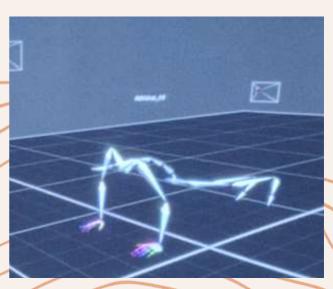
# INDUSTRIAL VISIT - BANGALORE

# Association of Bangalore Animation Industry Animation, Visual Effects, Gaming and Comics Centre of Excellence



On January 11th 2023, a group of thirty seven second-year B.Tech Gaming Technology students from our institution had the opportunity to visit the Association of Bangalore Animation Industry (ABAI), Animation, Visual Effects, Gaming and Comics (AVGC), Centre of Excellence (CoE) in Bengaluru









Demonstration of the Advanced 'Whole Body Capture Rig' or '360 Degree Full Body Scanner' by Mr. Sujeeth, a photogrammetry technician at ABAI was one of the highlight of this visit. Furthermore, Students also witnessed the UK based VICON systems, which are considered a gold-class standard in motion capture. Dr. A. Chinnasamy, Dr. G. Divya, Dr. B. Prabu Kavin and Ms K. Panimalar accompanied the students and ensured that Industrial visit was a success.



# INDUSTRIAL VISIT - CHENNAI

# **ADANI CONNEX - DATA CENTER**

March 20, 2023

On March 20th 2023, a group of twenty Third-year B.Tech Big Data, second-year B.Tech Data Science, M.Tech Integrated Data Science students from our institution had the opportunity to visit the Adani Connex Data Centre Industry, Siruseri, Chennai. The industry offers a wide range of knowledge on Data Centre infrastructure and usage by software industries.



Strategically located in SIPCOT IT Park, AdaniConneX Chennai 1 Data Center is a first-of-its-kind multi-tenant purpose-built facility that opens the door to a global network of data centers along with domestic access to other metro markets in India. Dr. S. Ganesh Kumar, Dr A. Shobana Devi and Dr. K. Shantha Kumari accompanied the students in this one day visit that opened an awareness – DATA is also a perishable entity, unless it is stored in right temperature and physical security.



In this poster, A method is presented for groundnut leaf disease identification to identify whether the leaf is healthy or not with the help of the Deep Learning approach with Pre-trained Convolutional Neural Networks. Then, Support Vector Machine (SVM) classifier is used to classify the images into different disease categories and achieved 95.67% classification accuracy and model prediction accuracy of 90.23%.

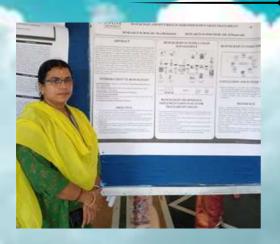
Research Scholar Name: Anna Anbumozhi Supervisor Name: Dr. A.Shanthini

# Best Poster Presentation Award Congratulations

This Poster examines the concept of privacy and security of Blockchain and the techniques that are needed for implementing strong security properties in Blockchain-linked applications that include zero-knowledge proofing, hash chained storage, signatures and consensus procedural algorithms. As a result, the reader could have a better knowledge of the concept of privacy and security of Blockchain in its area of fundamental aspects, uses and applications etc.

Research Scholar Name: Balachander S Supervisor Name: Prof. A. Murugan

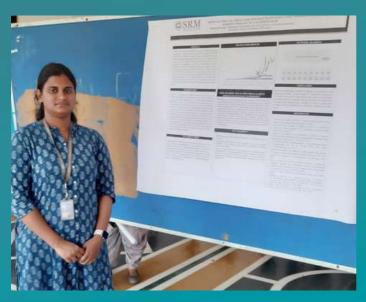




The poster shows how blockchain can manage the supply chain for non-perishable agricultural food (NPAF). Keeping product quality high across the supply chain is a major challenge for the food business and the proposed system makes the history accessible. The product can be checked for quality and cleanliness in supply chain. A trust less environment by utilizing Blockchain, RFID, and loT is created

Research Scholar Name: Mrs.B.Subashini Supervisor Name: Dr. D. Hemavathi





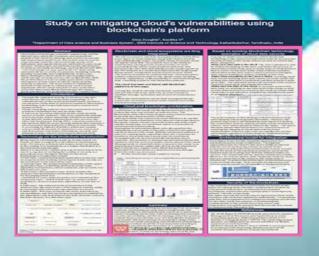
The massive growth of cryptocurrencies creates scalability issues for the blockchain. As many companies try to migrate their existing system to the blockchain, the current PoW consensus would be difficult to solve due to its scalability issues. This research aims to improve scalability issues and increase transaction speed using technologies such as flash network, plasma money & hard/soft fork.

Research Scholar Name: Ms Harshini Pooja Supervisor Name: Prof. S. Ganesh Kumari

The proposed Hyperledger Fabric Blockchainarchitecture provides a secure, transparent and immutable mechanism to store, share and exchange EHRs in a peer-to-peer network of different healthcare stakeholders. It ensures interoperability, scalability and availability in adapting the existing EHRs for strengthening and providing an effective and secure method to integrate and manage patient records among medical institutions in the healthcare ecosystem.



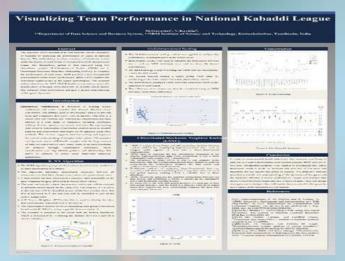
Research Scholar Name: Saranya.R Supervisor Name: Prof. A. Murugan



In this poster, Importance of cloud computing and maintaining security and data management is presented. Furthermore, the advantages that will be provided by forming a system that integrates the blockchain and the cloud environment is discussed. This leads to the development and improvement of security and service providers, as well as an increase in data security and manage user data to preserve it.

Research Scholar Name: Dina Al Zoghbi Supervisor Name: Prof. V. Kavitha



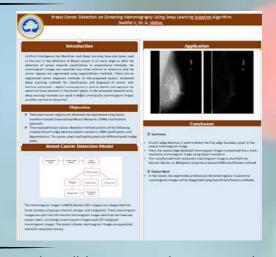


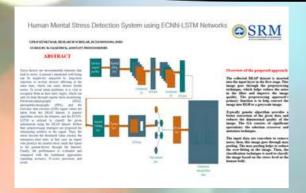
In this poster, visualizing the sport kabaddi and gain insights into the dynamics of Kabaddi by analyzing the performance of teams in national leagues is given. MDS and t-SNE, two data visualization methods, were applied to accomplish this. The analysis's findings provided a crucial new understanding of the dynamics of the game and the variables affecting a team's performance.

Research Scholar Name: M.Gayathri Supervisor Name: Prof. V. Kavitha

In this poster, Enhanced Deep Learning methods for the classification and diagnosis of cancer with features extracted is presentd. A digital mammogram is used to detect and segment the abnormal mass portions in the breast region. In the proposed research work, deep learning methods are used to detect and classify mammogram images as either normal or abnormal.

Research Scholar Name: V.Swetha Supervisor Name: Prof. G. Vadivu



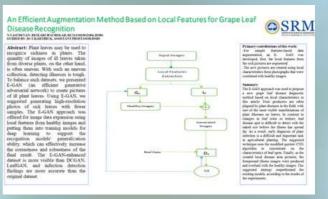


A person's emotional well-being can be negatively impacted by long-term exposure to several stresses affecting at same time. It is vital to recognize them in their early stages, this is done by regular stress monitoring. Electroencephalography (EEG), photoplethysmography (PPG), and the Galvanic skin reaction (GSR) signal values are taken from the DEAP dataset. A GA extracts the features, and the ECNN-LSTM is utilized to classify the given information using the DEAP dataset.

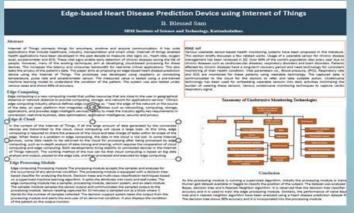
Research Scholar Name: S. Praveen Kumar Supervisor Name: Dr. T. Karthick

Plant leaves may be used to recognize sickness in plants. The quantity of images of ill leaves taken from diverse plants, is often uneven. With such an uneven collection, detecting illnesses is tough. We presented E-GAN (an efficient generative adversarial network) to create pictures of ill plant leaves. Using E-GAN, we suggested generating high-resolution photos of sick leaves with fewer samples.

Research Scholar Name: N.Vasudevan Supervisor Name: Dr. T. Karthick



Many of the existing techniques aim at developing cloud-based processing for IoT medical devices. This increases the latency and consumes bandwidth for real-time critical applications. This also leaks the privacy of the patient's data. This paper aims at proposing an edge-based heart disease prediction device using the IoT. The prototype was developed using Raspberry pi connecting temperature, pulse rate and accelerometer sensor.



Research Scholar Name: B. Blessed Sam Supervisor Name: Dr. M. Prakash

# Jeffrey Ullman Colloquium January - March 2023

#### Benefits of Decentralised Stock Exchange

Name : Mr.Mohideen Abdulkader Supervisor Name : Dr.S.Ganesh Kumar

Date: 21/01/2023

Existing trading in the stock market occurs through centralized systems with the assistance of numerous third-party intermediaries. Existing share market trading is constrained by issues such as delayed financial settlements, a lack of data security, a single point of failure, and exorbitant processing fees for each trade executed. A highly secure decentralized application built on top of Ethereum using smart contracts can be built to make stock market trading more transparent and easier. The decentralized blockchain platform was built with Ethereum and smart contracts that can be used to execute trades without the use of third-party intermediaries. The proposed decentralized application is integrated with an off-chain storage system, which improves the scalability and privacy of stock exchange platform transactions by transferring sensitive transactional data off-chain. The proposed model's performance is evaluated in terms of the number of transactions under various network sizes. The experimental results show that the proposed stock trading platform is more efficient and it can meet the needs of Indian stock exchanges such as the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE).

#### Softwares in Achieving research

Presented various possibilities about how artificial intelligence can enhance the research process making it more effective an efficient. From data collections and analysis to hypothesis testing, learn how Al can assist researchers in making better decisions and uncovering new insights.

Name : Mrs.Dina Zougbi

Supervisor Name: Dr. V.Kavitha





# Jeffrey Ullman Colloquium

#### Clinical trials of health record

Clinical trials were first introduction in Avicenna's The Canon of Medicine in 1025 AD, practical experimental in the process of discovering and proving the effectiveness of medical drugs. Clinical trial supply chains are crucial for ensuring a clinical trial runs smoothly. Clinical trials regularly need materials. Therefore, clinical trial supply chains refer to order, manufacturing, transporting drugs or medical devices to ensure the clinical trial doesn't halt. Clinical trials require an uninterrupted supply of clinical trial materials timely. Therefore, implementing robust supply chain management is essential.



Name : Mrs.Sarayanya R

Supervisor Name: Dr.A.Murugan

#### Power BI

Power BI is a collection of software services, apps and connectors that work together to turn your unrelated source of data into coherent, visually immersive and interactive insights. The data can be either in excel, spreadsheet or collection of cloud based and on premises hybrid data warehouses.

Name : Mrs.Anna Anbumozhi Supervisor Name : Dr.A.Shanthini



Date: 18/02/2023

#### Reservoir Sampling

Reservoir sampling is a family of the randomised algorithms for choosing a simple random sample without replacement. The size of the algorithm is unknown to the algorithm and is typically too large for all items to fit into the main memory. It can be used to obtain a sample of size from a population of people with a particular hair color. The samples are called as stream.

Name : Ms.Harshini Poojaa K

Supervisor Name: Dr.S.Ganesh Kumar



Contact less payments with CPoC (Contactless Payments on COTS) refers to a new technology that allows merchants to accept contactless payments using an unmodified Commercial off-the-shelf (COTS) device, such as a smartphone or tablet. CPoC technology is designed to simplify the acceptance of contactless payments and reduce the cost and complexity of implementing a traditional point-of-sale (POS) system.

Name: Mr.Balachander.S

Supervisor Name : Dr.A.Murugan





# Jeffrey Ullman Colloquium

#### Alteryx

Alteryx is a powerful data analytics and visualization software that provides users with a wide range of tools for data preparation, blending, and advanced analytics. It allows users to easily combine, clean, and analyze data from multiple sources, including spreadsheets, databases, and cloud services, without requiring any programming knowledge. With Alteryx, users can perform advanced analytics tasks such as predictive modeling, spatial analysis, and machine learning, allowing them to uncover valuable insights from their data. These insights can help organizations make data-driven decisions and achieve better outcomes. Alteryx also provides a range of data visualization and reporting tools, which enable users to communicate their insights and findings effectively.

Date: 04/02/2023 Name: Mrs.Gayatri.M

Supervisor Name: Dr.V.Kavitha

#### **Ensemble learning**

Ensemble models in machine learning operate on a similar idea. They combine the decisions from multiple models to improve the overall performance. This achieved in various ways, which you will discover in this article. The objective of this study is to introduce the concept of ensemble learning and understand the algorithms.

Name: Mr.Blessed Sam

Supervisor Name: Dr. Prakash



#### Generative adversarial network

GANs are used to generate new data based on existing data patterns, while data augmentation is used to create new data samples by applying various transformations (rotated, flipped, cropped, or resize) to existing data. System of two neural networks competing against each other like game framework. They were first introduced by Ian Goodfellow et al. in 2014.

Name: N. Vasudevan

Supervisor Name: Dr. T. Karthick



#### Research Tool

Tools such as Connected papers, insightful, genei.ai are very important and useful for writing the research papers.

Name: Mrs.Subashini.B

Supervisor Name: Dr.Hemavathi



# Placement and Higher studies Details

#### 2021-22 STATISTICS

Specializations in Final Year : Big Data Analytics & CSBS

Overall Placement success: 96.5 %

Salary Package range: 3.6 LPA to 39.65 LPA

MITACS Research Internship: 04

Student exchange programs: 04

#### Vidushi gupta, BDA, Saxion University of Applied Sciences

Hello everyone! I'm Vidushi and I had the opportunity to be one amongst the two people who were chosen for the exchange program at Saxion University of Applied Sciences in the Netherlands. It was an enriching experience for me to adapt to the Dutch pedagogy of learning and working. thank SRM, DSBS and the IR department for having the faith in me for this exchange program and I highly recommend to grab this opportunity as soon as it comes your way!

Congratulations to Ms.Vidushi Gupta for her admission in MIT Management SLOAN School - Master of Business Analytics





# Congratulations Vidushi!

Congratulations on your admission to the MIT Sloan Master of Business Analytics (MBAn), Class of 2024

Welcome to the MIT Sloan experience: twelve months that will challenge you, transform your career, and help you reimagine what's possible

You are now part of a community of analytics enthusiasts, quantitative thinkers, and innovative forces.



#### Harsh Sharma, BDA, MITACS Intern, BARCLAYS [14 LPA]

I am expressing my gratitude towards the DSBS Department for helping me find a research internship. The department provided me with the necessary support and guidance, including preparing documents, selecting projects, and staying up-to-date with deadlines. Thanks to their efforts, I was able to secure a position in the MITACS Globallink Research Internship program, which allowed me to gain hands-on research experience and work alongside talented individuals in my field. Throughout my internship, the department continued to offer support and guidance whenever needed, and their efforts were instrumental in helping me achieve this incredible opportunity.

# Gallery



























### **Thirukkural**

# DATA **CHRONICLE**

OFFICIAL NEWSLETTER **DEPARTMENT OF DATA SCIENCE AND BUSINESS SYSTEMS** SCO | SRMIST | CHENNAI



#### **EDITORIAL TEAM**

4TH FLOOR, UNIVERSITY BUILDING, SRMIST

Contact: dsbsnews@gmail.com https://fliphtml5.com/homepage/cgyxk

குறள் எண்: #387

**April 2023** 

இன்சொலால் ஈத்தளிக்க வல்லார்க்குத் தன்சொலால் தான்கண் டனைத்திவ் வுலகு.

வாக்கில் இனிமையும், பிறர்க்கு வழங்கிக் காத்திடும் தன்மையும் கொண்டவர்க்கு இவ்வையகமே வசப்படும்

The world will praise and submit itself to the mind of the king who is able to give with affability, and to protect all who come to him





**Evolution of** Video Games













Ranked 4°

