# DATA CHRONCLE

**OFFICIAL NEWSLETTER** 

DATA SCIENCE AND BUSINESS SYSTEMS

SCHOOL OF COMPUTING
SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
KATTANKULATHUR









## DATA CHRONICLE



#### INSIGHTS

**VIDUSHI GUPTA-**



→ GOLD MICROSOFT LEARN STUDENT AMBASSADOR Page 23



GAMING DEVELOPER COMMUNITY @ SRM
→ INAUGRATION

Page 15



WORK LIFE BALANCE - PEP TALK

MRS RAJALAKSHMI , DIRECTOR - 24 \* 7, ZOHO

Page 13

Women's Day -2022



CLOUD COMPUTING - TECH TALK

MR SHEIK DAWOOD,

GRANDSON OF DR APJ ABDUL KALAM

Page 21



STUDENT ENTREPRENEURS

Page 24

PAPERPLANE
Current Status

## DATA CHRONICLE

#### Contents

#### Faculty Achievements

- a. Research Patent Grant
- b. Research Project funding Grant
- c. National Family Health Survey Ministry of Health, GoI
- d. Startup Recognition
- e. Ph.D. Confirmation
- f. Consultancy Projects
- g. Publication of Patents
- h. Research Publications
- i. Faculty Up skilling

#### DSBS Department Activities and Events

- a. International Women's day
- b. SRM Gaming Developer Community
- c. First year students orientation
- d. FDP on Patent Commercialisation
- e. Research Talk
- f. Placement Talk Series
- g. FDP on MLDSA

## DATA CHRONICLE

#### Contents

- DSBS Students Accomplishments
  - a. Gold Microsoft Learn Ambassador
  - b. SRM Hackathon 6.0 Runner
  - c. Jeffrey Ullman Research Colloquium
- Other Remarkable Events and Contributions
  - a. SIIEC Funded Projects
  - b. Outreach Activities
  - c. Faculty in Cultural & Sports
  - d. Progressive Web Application Faculty Article
  - e. J.K Rowling Faculty Article
  - f. Student Article
- Gallery
- Editor's Message

#### Research Patent Grant

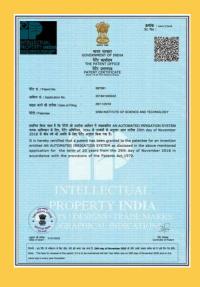
### CONGRATULATIONS



**DSBS** Dept







Congratulations to **Dr. A. Murugan** & his team of Data Science and Business Systems Department, School of Computing & his team, has got their patent granted for the title: Automated Irrigation System.

An automated irrigation system comprising:

- 1.On-field irrigation equipment having a control unit configured to start/stop the on-field irrigation equipment based on one or more command signals received by the control unit from a remote location;
- 2.A wireless sensor module deployed on a field and configured to sense at least one parameter selected from the group consisting of soil humidity, air humidity, and soil texture and communicate the same to a remote server over a network.
- 3. The remote server is configured to process at least one parameter as received from the wireless sensor module and generate a command signal to be communicated to the control unit of the on-field irrigation equipment.
- 4.A plurality of sensor nodes deployed on the field and configured to sense said at least one parameter, wherein the plurality of sensor nodes is configured to communicate with one another;

Data Chronicle PAGE 01 April 2022

#### Research Project Funding Grant

## CONGRATULATIONS



**Dr M. Prakash**Associate Professor
DSBS Dept







Dr. M. Pushpalatha (Professor & HoD/ C.Tech) and Dr. M. Prakash (Asso Prof / DSBS) has been granted a funding Research project of worth **Rs. 912333** /- under Research Promotion Scheme (RPS) of All India Council for Technical Education (AICTE). The funding is provided to carry a project as given below:

- Project: Drone Based Crop Disease Detection and Recommendation System.
- Principal Investigator: Dr. M. Pushpalatha, Professor & Head,
   Department of Computing Technologies.
- Co- Principal Investigator: Dr. M. Prakash, Associate Professor,
   Department of Data Science and Business Systems

Duration: 3 Years

#### National Family Health Survey NFHS - 5

## CONGRATULATIONS





**Dr. G. Vadivu**, Professor, DSBS is pioneering a Consultancy Work for National Family Health Survey NFHS – 5 along with School of Public Health, SRM Medical College Hospital and Research Centre (SRM MCH&RC), Kattankulathur. The work involves collecting health related data from household of all districts in the state of Tamilnadu and Union Territory of Puducherry. The Data included population, health, and nutrition of every individual.

The executing team under the leadership of Dr. Padma Venkat, Dean, School of Public Health (SPH) comprised of Co-Project Leads Ms. Geetha Veliah and Dr. Prakash. M, Assistant Professors. They were ably supported by a core team of Dr. C. Ramanujam, Dr. M. Bagavandas, Dr. G.Vadivu, and Dr.M. Logaraj for conducting Tamil Nadu North and Puducherry.

The team was further assisted by Dr. B. Kalpana, Dr. Varadarajan, Dr. Kayalvizhi Jayavel, Dr. Balaji. RB Dr. Bharathi and Mr. Sathish.

Data Chronicle PAGE 03 April 2022

#### Faculty Start-up Recognition from NIDHI - PRAYAS

## CONGRATULATIONS

## FACULTY STARTUP BRAINWAVES NEUROREHAB SOLUTIONS PRIVATE LIMITED

Selected for Nithi- Prayas program

#### Received grant Rs. 7 Lakhs







#### **Brainwaves got recognition from Startup India**

BRAINWAVES NEUROREHAB SOLUTIONS PRIVATE LIMITED incorporated as a Private Limited Company is recognized as a startup by the Department for Promotion of Industry and Internal Trade. The startup is working in 'Healthcare & Lifesciences' Industry and 'Healthcare Technology'



**Dr R.Rajkumar**Assistant Professor
DSBS Dept



**Dr. S. Bhasi**Professor & Head
Psychology Dept



**Dr. P. A. Sridhar**Assistant Professor (R)
EIE Dept

#### Confirmation of Ph.D Degree

## CONGRATULATIONS



**Dr M.Sangeetha**Assistant Professor
DSBS Dept



Our Faculty Prof. Sangeetha defended her Ph.D Research thesis - DATA IMPUTATION FOR HEALTH CARE DATA USING AN ENHANCED EXPECTATION MAXIMIZATION APPROACH and been awarded with Doctorate in Philosophy after successful Public Viva-Voce at Sri Chandrasekarendra Saraswathi Viswa Maha Vidyalaya.

#### Industrial Consultancy Projects and Works



**Dr D.Hemavathi**Assistant Professor
DSBS Dept

Dr D Hemavathi badged a Rs 100000/- grant from Eazythings Technology Pvt Ltd to do a consultancy project in "Industrial Dashboard design using MQTT Protocol for production monitoring in industry 4.0"

Way to Go!

Data Chronicle PAGE 05 April 2022

#### Industrial Consultancy Projects and Works

## CONGRATULATIONS



**Dr K.Arthi**Associate Professor
DSBS Dept

Dr.Arthi K (DSBS) and Dr. C Amutha Devi (Cintel), badged Rs. 47,200/- from Mikro Zone Technologies Pvt Ltd to do a consultancy project titled "Business Management System".



Dr. K. Shantha Kumari (DSBS) and Dr. K. Priyadharshini (DSBS) badged Rs. 25,000/-per month from Business Gateways India to do consultancy project titled "Block Chain Technology - adaptation in transactions" for 1 Year Duration.

**Dr K.Shantha Kumari & Dr K. Priyadarsini** Assistant Professor, DSBS Dept



**Dr S.Suchitra**Associate Professor
DSBS Dept

Dr. S Suchitra (DSBS), Dr. Jeyaselvi (NWC) andDr. N. Senthamarai (NWC), badged Rs.30,000/- do to consultancy project titledWebsite creation for "Nano technology"

Way to go!



#### Publications of Research Patents

## CONGRATULATIONS



**Dr P.Saravanan**Assistant Professor
DSBS Dept

#### Title of the invention:

Design Intelligence System for Smart Food Recommendation using ML for Health Management System

**Inventor: Dr. P. SARAVANAN** 

Address of Applicant: SRMIST, Kattankulathur.



Dr M. Prakash

Dr M. Prakash Associate Professor DSBS Dept

#### Title of the invention:

A Framework for preserving privacy of Health records using Head Bucketization

Inventor: Dr. M. PRAKASH

Address of Applicant :SRMIST, Kattankulathur.

#### Title of the invention:

A Crowd Detection System and thereof

Inventor: Dr. M. PRAKASH

Address of Applicant :SRMIST, Kattankulathur.



**Dr P. Rajasekhar**Assistant Professor
DSBS Dept

#### Title of the invention:

A Machine Learning based approach to analyze the network security of medical data using blockchain

Inventor: Dr. P. RAJASEKAR

Address of Applicant: SRMIST, Kattankulathur,

Kudos!

#### **DSBS** Publications



#### **HIGHEST IF DETAILS**

S. Srividhya, Suresh Sankaranarayanan, Sergei A. Kozlov, Joel J. P. C. Rodrigues, Fuzzy Aggregator Based Energy Aware RPL Routing for IoT Enabled Forest Environment, CMC-TECH SCIENCE PRESS. 2022 March, pp.4039-4055. [SCI, Impact Factor: 3.77]. doi:10.32604/cmc.2022.026306.

#### **Recent Journal Publications**

- Prakash M, et al.2022 A patient-centric doctor referral model based on hyperledger chaincode, IEEE International Conference on Computation System and Information Technology for Sustainable Solutions (CSITSS).
- Jayapradha, J., Prakash, M., Alotaibi, Y., Khalaf, O.I. and Alghamdi, S.A., 2022. Heap Bucketization Anonymity—An Efficient Privacy-Preserving Data Publishing Model for Multiple Sensitive Attributes. IEEE Access, 10, pp.28773-28791.
- Jayapradha, J. and Prakash, M., 2022. A Survey on Privacy-Preserving Data Publishing Methods and Models in Relational Electronic Health Records. In Sustainable Advanced Computing (pp. 645-661). Springer, Singapore.

Data Chronicle PAGE 08 April 2022

#### **Recent Journal Publications**

- Sharanya, S., Revathi Venkataraman, and G. Murali. "Predicting remaining useful life of turbofan engines using degradation signal based echo state network." International Journal of Turbo & Jet-Engines (2022).
- Mythily, M., Saha, S., Sudhakar, S. and Swamidason, I.T.J., 2022. BPM supported model generation by contemplating key elements of information security. Automated Software Engineering, 29(1), pp.1-23.
- Ganesh Kumar, S., Sridhar, S.S., Hussain, A., Manikanthan, S.V. and Padmapriya, T., 2022.
   Personalized web service recommendation through mishmash technique and deep learning model. Multimedia Tools and Applications, pp.1-19.
- Sindhu, S. and Saravanan, M., 2022. Performance Evaluation of Multisensor Data Fusion
   Approaches for Handling Data Uncertainty and Inconsistency in Robot Localization.

   International Journal of Mechanical Engineering.
- Shobanadevi, A., Maragathm, G., Gangadharan, S.M.P., Soni, M., Kumar, R., Tran, T.A. and Singh, B.K., 2022. Internet of Things-Based Data Hiding Scheme for Wireless Communication. Wireless Communications and Mobile Computing.
- Ananthajothi K,Karthick T,Amanullah M, 2022. Automated rain fall prediction enabled by optimized convolutional neural network-based feature formation with adaptive long shortterm memory framework. Concurrency and Computation: Practice and Experience - Wile.
- Lu, W., Vivekananda, G.N. and Shanthini, A., 2022. Supervision system of english online teaching based on machine learning. Progress in Artificial Intelligence, pp.1-12.
- Abhishek, Rini, Madhukar, Saravanan, et al. 2022. 3D Animation and Virtual Reality Integrated Cognitive Computing for Teaching and Learning in Higher Education. Recent Trends in Intensive Computing
- Saravanan P, Muthukumaran. A Deep Analysis of Higher Education Cognitive and Psychological Learning Impact During Covid 19 Pandemic. Recent Trends in Intensive Computing.
- Pitchai, R., Supraja, P., Sulthana, A.R., Veeramakali, T. and Babu, C., 2022. MRI image analysis for cerebrum tumor detection and feature extraction using 2D U-ConvNet and SVM classification. Personal and Ubiquitous Computing, pp.1-10.

Data Chronicle PAGE 09 April 2022

#### **Recent Conference Publications**

- Dr A. Shobana Devi presented a paper titled "Improved EAACK: Developed Secure Intrusion Detection System Using Genetic Algorithm" in the conference 2021 Innovations in Power and Advanced Computing Technologies (i-PACT) at VIT Chennai.
- Dr K.Dhanasekaran presented a paper titled "An Extensive study on pretrained Models for Natural Language Processing Based on Transformers" in the conference International Conference on Electronics and Renewable Systems (ICEARS 2022), Tuticorin, India , 16-18, MARCH 2022
- Dr K.Shantha Kumari, Dr K.Priyadarsini presented a paper titled "RELY Reassuring Life for Elderly adults with Blockchain enabled Pervasive Healthcare systems - A Conceptual Framework "in 3rd Annual DST SERB sponsored International Conference on Data Science, Machine learning and Blockchain technology 2022 (AICDMB)

#### Participation in Workshops, FDPs and Seminars

- Dr A.Shobana Devi, attended Two Weeks Short-Term Training Programme on "Augmented Reality and Virtual Reality - A Future Technology" held during 31st January 2022 to 11th February 2022 organized by SRM Institute of Science and Technology, Vadapalani, Chennai.
- Newly joined faculties of DSBS Dr K.Shantha Kumari, Dr K.Priyadarsini, Dr Paul T Sheeba and Dr A Shobana Devi participated in two days Faculty Refresher and Assimilation Program (FRAP 2022) held on 10th and 11th January 2022 at SRM Institute of Science and Technology, Kattankulathur, Chennai.
- Dr K.Shantha Kumari attended One week STTP on Machine Learning Algorithms for Data Science - 21 to 25, March 2022 organized by SRM Institute of Science and Technology, Vadapalani, Chennai.
- Dr K.Shantha Kumari attended 2 days Workshop on Product Commercialization and Start-up Initiatives through AI and Data Sciencee Technologies, 17 and 18, March 2022 at KL University

Data Chronicle PAGE 10 April 2022

#### Reviewers in Journals and Conferences

- Dr A.Shobana Devi is recognized as a Reviewer in "Machine Learning with Application Journal Elsevier Publications" for the reviews contributed to the journal.
- Dr A.Shobana Devi acted as Reviewer in 2022 International Conference on Communication, Computing & Internet of Things (IC3I0T-2022) held on 10th & 11th March 2022 organized by Sri Sai Ram Engineering College, Chennai.
- Dr K.Shantha Kumari acted as Reviewer in IEEE Conference International Conference on Smart Technologies and Systems for Next Generation Computing, on 25th and 26th March, 2022

#### **Notable Achievements**

- Dr R.Rajkumar is selected as a Mentor for ATAL Innovation Mission NITI AAYOG,
   Govt of India
- Dr R.Rajkumar has written an Article in The Hindu , Yearbook 2022
  - Tile of the Article: Fifth Generation(5G) Network, Published on 12th January 2022.
- Dr R.Rajkumar bagged a Special Prize in SRM International Women's Day for his
   PENN Short film competition.
- Dr R.Rajkumar delivered a online FDP session on Augmented Reality Tools at Deep Learning approaches conducted by VIT, Chennai.
- Dr R.Rajkumar delivered a online session on Intellectual Property Rights to Sri Krishna college of Engineering and Technology, Coimbatore.
- Dr R.Rajkumar delivered a physical session Virtual Reality and Augmented Reality at BNM Institute of Technology, Bangalore.
- Dr R.Rajkumar delivered a physical talk on Project to Product to Sri Sri Ram Engineering College, Chennai.



#### Faculty Upskilling

#### **AWS-Academy Courses**

#### **AWS Academy Machine Learning Foundation**

• Dr.K.Priyadarsini, completed the course and received the digital batch.

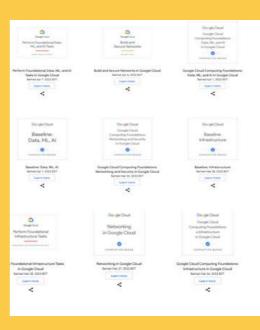


#### Google Cloud Computing Foundations

- 1. Google Cloud Computing Foundations: Cloud Computing Fundamentals
- 2. Google Cloud Computing Foundations: Infrastructure in Google Cloud
- 3. Google Cloud Computing Foundations: Networking and Security in Google Cloud
- 4. Google Cloud Computing Foundations: Data, ML, and AI in Google Cloud

#### **Faculties Certified:**

- Dr.T.Veeramakali
- Dr.A.Shobanadevi
- Dr.Paul T Sheeba
- Dr.K.Priyadarsini
- Dr Jeba Sonia J

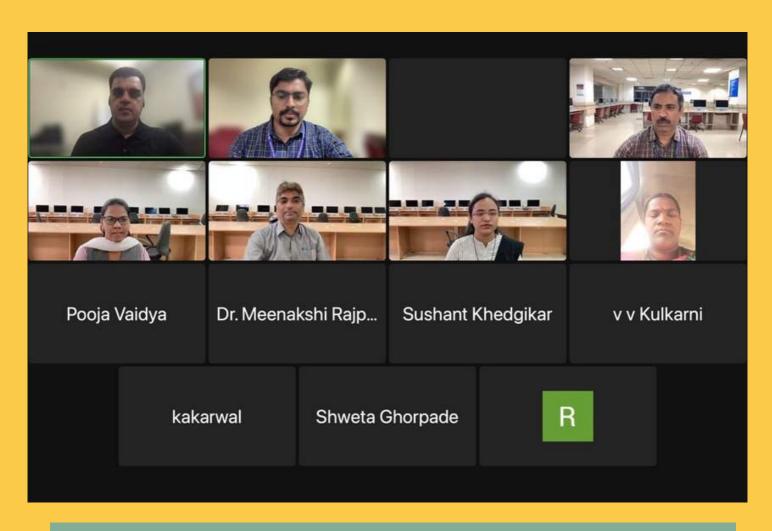


#### Faculty Upskilling

#### **Apple - Swift FDP**



- Two of DSBS faculties nominated to attend apple Swift language workshop for 15 days.
- Dr. P. Saravanan and Dr. R. Rajkumar were attended the workshop during march 2022.
- Swift is a powerful and intuitive programming language for iOS, iPadOS, macOS, tvOS, and watchOS.



Data Chronicle PAGE 13 April 2022

#### DSBS International Women's day





International Women's day was celebrated in our department on March 5,2022 with much fun, excitement and a Pep-Talk from an inspiring leader Rajalakshmi Srinivasan, Director - Site24x7, Zoho, Global Speaker.

Our Chairperson Dr. Revathy Venkataraman graced the occasion with her insightful thoughts. This event turned out to be a mega get together, when Dr. M. Pusphalatha- HOD / Computing Technologies, Dr. Annapurani Panaiyappan. K HOD/Networking and Communications, Dr. R. Annie Uthra, HOD/ Computational Intelligence and our HOD Dr. M. Lakshmi shared the stage to portray the message of Women's day. The women faculty of DSBS Department participated in various fun activities with much unity and happiness.







Data Chronicle PAGE 14 April 2022

#### Game Developer Community Club



Game Developers Community SRM had its inauguration on the 16th of March 2022. The inauguration was held in a blended mode, with all the students of the first-ever batch of CSE - Gaming Technology students attending the event physically and the rest over the internet via Zoom.

The inauguration was graced by the presence of Mr. Rajesh Kumar, Marketing head at Scopik Edutech Private Ltd., and Mr. Jainaresh BC South Region Head for the Media & Entertainment Skills Council. The Chairperson of SCO, Dr. Revathi Venkataraman and HOD of DSBS, Dr. M. Lakshmi were also present at the event and offered their pearls of knowledge along with a hearty congratulations to the conveners of the club.

The event ended as a resounding success with the guests addressing the students on the latest and greatest innovations in the fields of VR, AR, MR, and XR.

#### First Year Students - Orientation Programme

#### Aloha to New entrants!!!

March 28,2022 was the day when our beloved first year students saw SRMIST in real. The online learning process bid a goodbye and students were given a warm welcome to experience the real offline mode of learning. They saw their teachers, their classmates, roommates and Friends. Everything was new to them and they were unaware of the treasure that is hidden in SRM. Hence, we the faculty with the guidance of our beloved HOD Dr. M. Lakshmi organized an orientation programme on March 30, 2022 that showcases every opportunity available for a student to become an entrepreneur or Employee of renowned industries, as wells opening the doors to study abroad through SRM banner. This programme platformed various clubs in SRM and its functionalities.









#### First Year Students - Orientation Programme



The programme was presided by our respectful chairperson Dr Revathi Venkatraman.

- The Entrepreneurship and Innovator details were shared by Dr Shanthanu Patil, Associate Director, SIIEC.
- The placement opportunities and training details were presented by Dr. Venkata sastry, Director / Career Center and his team.
- Dr Madhusoodhan, Head of Career Development Center projected about the CDC activities
- The Program coordinator for Data Science specialization, Dr. G.Vadivu gave her valuable insights regarding the opportunities available for students
- Dr S.Sudhakar, Placement coordinator of DSBS department summarized the criteria that are needed to be fulfilled by a student to get dream placement offers.
- The AICTE internships and its significance was details by Dr. L. Anand -AICTE Internship Coordinator and Nodal Officer for ISRO -IIRS.
- Details regarding "Study Abroad Program" was presented by the DSBS Department SAP coordinator Dr.
   S. Suchitra
- The need of the hour "Student well-being" was focussed by DSBS Student Counsellor Dr. T.Karthick
- Awareness about the activities with respect SRM Wellness center was detailed by its director Dr Joesph Julian.
- Lastly, various clubs viz., game developers' community, Aarush, GitHub Club presented their objectives and their presence in SRMIST.

The entire program was coordinated by Dr. A. Murugan, Dr. S. Ganesh Kumar, Dr. K. Shantha Kumari, Dr. K. Priyadarsini and Dr. M. Ramprasath. Other First year Faculty advisors Dr K.Arthi, Dr V.Kavitha, Dr P.Rajasekar and Dr N.Poornima were supporting this program towards its success.

Data Chronicle PAGE 17 April 2022

#### FDP on Patent Commercialization



An Online Faculty Development Program entitled **Patent Commercialization** was organized on 24 January 2022. Our Alumni DIWAAGAR RADHAKRISHNAN SITARAMAN was the resource person and he delivered the Technical talk. He completed law in LL.M. – New York University (School of Law) and B.L. (Hons.) – Tamil Nadu Dr. Ambedkar Law University, Chennai (School of Excellence in Law) and B.Tech (Information Technology) – SRM University (SRMIST).

His Practice Areas are Competition law and Consumer protection law, Criminal laws, Cyber Crime laws, Employment laws, Environmental laws, General Commercial laws/Corporate laws, Intellectual Property laws, Private Client, Technology law and Data Privacy. Diwaagar is one of the founding Partners of Vivrti Law and is a dual qualified attorney admitted to practice law in the State of New York and in India. He manages the dispute resolution and advisory practice of Vivrti Law, along with Bharadwaj.



Data Chronicle PAGE 18 April 2022

#### Research Talk by Dr Paul Manuel



Dr. Paul Manuel with Faculty and Research Scholars from School of Computing







Talk Title: Fundamentals of complexity

Resources Person: Dr. Paul Manuel, Professor, Kuwait University

Date and Time: 5 Feb 2022 and 10 AM - 11 AM.

Venue: Techpark room number 404 and 405

A research talk was arranged for full time research scholars in physical mode. 100+ research scholars from School of Computing attended the talk and had a good interaction with Dr. Paul Manuel.

Organizer: Dr. N. Parthiban, Asso Prof/ DSBS

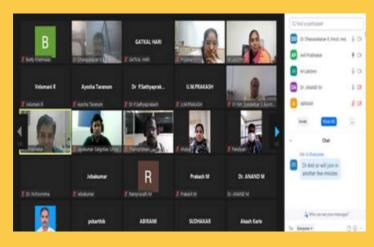
Data Chronicle PAGE 19 April 2022

#### Department Activities

DRDO Sponsored Five-Day National Level Faculty Development Programme (FDP) on RECENT ADVANCES IN QUANTUM MACHINE LEARNING FOR DEFENCE AND SECURITY APPLICATIONS (QMLDSA 2022)

The Department of Data Science and Business Systems (DSBS) organized a DRDO sponsored five days national level faculty development programme on "Recent Advances in Quantum Machine Learning for Defence and Security Applications" from March 7th to 11th 2022. Dr. M. Lakshmi, Professor & Head, DSBS, SRMIST delivered the welcome address. Dr. Revathi Venkatraman, Professor & Chairperson, School of Computing, SRMIST, delivered the presidential address. Dr. K. Dhanasekaran, Assistant Professor, DSBS, SRMIST, delivered the felicitation speech. A total of 10 sessions were handled by experts from reputed institutions and Universities and 73 participants attended the programme.

- Dr. Anil Prabhakar, Professor, Centre for Quantum Information Communication and Computing (CQuICC) IIT Madras, Director of Yali Mobility and Enability Foundation delivered the keynote speech on topics such as, classical Machine Learning vs. Quantum Machine Learning, Research focus & Challenges in Quantum Machine Learning (QML), and Quantum Secure Communications.
- The remaining sessions were handled by Dr. Chandrashekar Radhakrishnan, Principal Project Scientist, Dr. Pradeep Kiran Sarvepalli, Dr. T. Senthil Kumar, Dr. K. Kavitha, Dr. Kannimuthu, and Dr. B. Surendiran.
- The aim of the program was to address the need for harnessing the power of quantum technology and machine learning techniques for developing efficient and reliable solutions to the military and national security applications, weather data science, and medical data science and many other applications.





Dr. Revathi Venkatraman Professor & Chairperson, SCO, SRMIST

Dr. M. Lakshmi Professor & Head, DSBS, SRMIST



#### Convener(s)

Dr. K. Dhanasekaran, Assistant Professor, DSBS, SRMIST

Dr. E. Sasikala, Associate Professor, DSBS, SRMIST

Dr. M. Prakash, Associate Professor, DSBS, SRMIST

#### Placement Talk Series

#### ENTREPRENUR SUCCESS STORY

Talk Title: My Story - Entrepreneur/Start-up Journery

Resources Person: Heera Ravi

**Chief Founding Member, HR AKADEMI** 

Date and Time: 08th Feb 2022 and 10.00 - 12.00 PM

#### **ALUMNI TALK**

Talk Title: Big Data and Analytics - Fundamentals & Job Opportunities

Resources Person: Reshma.N

Data Engineer, Accenture [M.Tech CSE - BDA 2015-17]

Date and Time: 15th Feb 2022 and 2.00 - 3.00 PM

#### TECHNICAL TALK - SAAS, PAAS AND IAAS





Mr. Sheik Dawood with Dr. Kalam

Talk Title: Cloud Computing - Fundamentals & Job Opportunities

Resources Person: Mr. APJ MJ Sheik Dawood,

Senior Technical Manager with Kryptos Technologies

Date and Time: 3rd March 2022 and 6.00 - 7.00 PM

#### PREPARTORY TALK

Talk Title: How to face Campus Interview

**Resources Person:** Amish Anant

Verizon India, Hyderabad

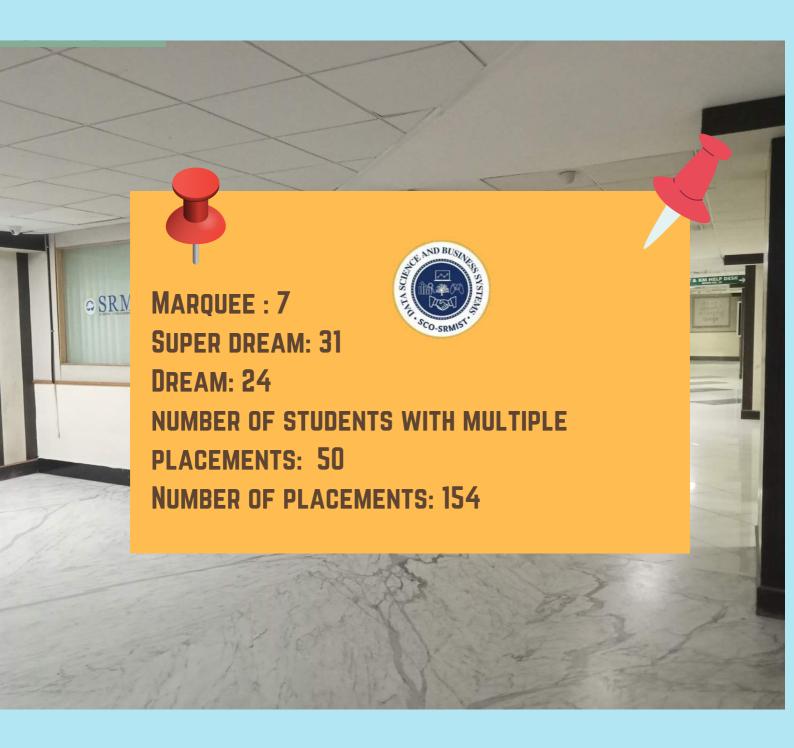
Date and Time: 16th Mar 2022 and 2.00 - 3.00 PM

Data Chronicle PAGE 21 April 2022



## PLACEMENT NEWS

As on March 2022





**ACHIEVE MORE!** 

#### Gold Microsoft Learn Student Ambassador









Among 3075 ambassadors across the global, 2 were selected to represent their demography and we are proud that Vidushi Gupta [III year CSE - Big Data Analytics] is selected to be Gold Microsoft Learn Student Ambassador to represent the state Tamil Nadu in January 2022.

Vidushi has created history as she is the first Gold Microsoft Learn Student Ambassador for SRM KTR and the only one till now!



#### Runner-up @ SRM Hackathon 6.0



Nirbyoleek Das from Gaming Technology got 2nd prize at Flagship event SRM Hackathon 6.0 [36-hour coding marathon] conducted during 2nd - 3rd April 2022.

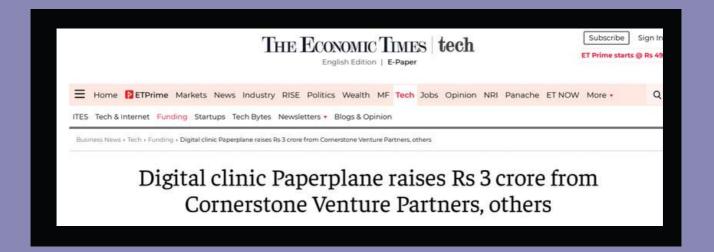








#### Paperplane Clinic App (paperplanetech.co)











Data Chronicle PAGE 24 April 2022

## Game Development Club SRM One Minute Game Jam









GDC SRM collectively took part in the One Minute Game Jam, held on itch.io. This is the first Game Jam that the club took part in as a whole. The club took this Game Jam as a method to test the waters, yet all the participating members were extremely excited about the competition and any further events like such.

The response was extremely surprising as 5 out of the 9 teams made it to the finish line and submitted their projects while the rest cut extremely close to the deadline and unfortunately were unable to make it to the end. Nevertheless, not only was the response overwhelming, but so was the quality of work, and the club is only set to go higher from here.



### STUDY ABROAD PROGRAM



## Student selected for SAP to Illinois Institute of Technology, USA



Siddharth Jain Tater
B.Tech CSBS
RA201104201065



Akash Bathula
B.Tech CSBS
RA201104201001



#### Congratulations.!!





Rijul Sarji (BDA-II Year –V2 Section), Stuti Gupta (BDA-II Year –V2 Section) and Anishka Kesaria (CSE-II Year) participated and secured third position with the cash prize of 5000/- in Mozohack 3.0 organized by SRM Kzilla Club.

#### Congratulations.!!



Resonate by Microsoft Learn Students Ambassador, SRM Campus



#### Team:

- Deepak Kumar Team Lead (II Yr BCT U2)
- Aditya Jain (II Yr BCT U2)
- Abhivansh Bhatnagar (II Yr BCT U2)
- Ayushya Jain (II Yr CSE A1)
- Sreyom Sresaan (II Yr CSE A1)

Title: WriteUp providing a secure platform for journalists to post media items anonymously and without censorship (Technology used: Blockchain and IPFS)

Position: Top 10 in overall

**Prize: Certificate and Schwags** 

Data Chronicle PAGE 27 April 2022

#### Congratulations.!!



#### DevFest by Birla Institute of Technology, Goa



Team: Deepak Kumar – Team Lead (II Yr – BCT – U2)

Aditya Jain (II Yr - BCT - U2)

Ayushya Jainn (II Yr - CSE - A1)

Sreyom Sresaan (II Yr - CSE - A1)

Abhay Lal (II Yr - CSE - A1)

Title: A secure file sharing application using Encryption, Blockchain

and IPFS

Position: Best Blockchain Project

Prize: Cash 15000 INR and Certificate

#### **Congratulations.!!**



## Buidl It organized by Polygon Technology (India's Biggest Web 3.0 Hackathon)



Team: Deepak Kumar - Team Lead (II Yr - BCT - U2)

Aditya Jain (II Yr - BCT - U2)

Abhivansh Bhatnagar (II Yr - BCT - U2)

Sreyom Sresaan (II Yr - CSE - A1)

Ojas Sinha (II Yr - CSE - A1)

Title: A full stack Blockchain Gaming project with WebApp, PhoneApp on Chess (Technology used: Web 3.0, IPFS, Blockchain, NFTs)

Position: Second Position for best implementation of FileCoin + IPFS

Third Position for Community Choice Project

**Prize: Community - 2000 USD and Schwags** 

Implementation - 250 USD



## Gallery of Jeffrey Colloquium









#### Jeffrey Ullman Colloquium



Jeffrey Ullman Colloquium has been initiated with the aim of researching effectively among the Research Scholars of Department of Data Science and Business Systems. Weekly seminar series are conducted among the Research scholars and the Faculty members. The seminar series consists of the tools, methodologies, algorithms, etc from which the researchers will get benefited Open and regular communication is very much encouraged.

Faculty Incharge: Dr. B. Parthiban.

#### Internet of Things for Smart Irrigation/Farming using Cisco Packet Tracer

Name: Mr. Anna Anbumozhi

Supervisor Name: Dr. Shanthini A

Date: 29/01/2022

Smart Irrigation is the system with new technology that adopts new approaches to the farmers for reducing the labour cost and time. The real time implementation is expensive so, we can go for simulating the system in Cisco Packet tracer by fitting sensors, actuators, Sprinkler, MCU/SBC and Smart phone/remote system in the IDE and connect the components with the help of IOT custom cable to establish the connection. Then the data can be collected over the server and sends the data to cloud to analyze and visualization. This presentation shows a small demo with 4 sprinklers, two water level monitors, home gateway and Smart phone with wireless connectivity by changing the settings in Cisco Packet Tracer simulation software package.

### Analysis of plant leaf fiseases recognition using Image Processing with Machine Learning techniques

Name: Mr. Vasudevan

Supervisor Name: Dr.T.Karthick

Date: 26/03/2022

Agriculture plays a foremost role in countries growth. One of the most vital aspect in agriculture field is plant disease that reduces quality and quantity of agricultural crops. The machine learning approaches can easily recognize these diseases compared to physical method. So the machine learning techniques in addition to image processing is used to identify diseased leaf. These methods will help in recognizing plant diseases thus increasing the yield of plants. This presentation concentrates on the previous research work that used the characteristics of machine learning techniques in addition to image processing. It describes the various plant disease types, image processing methods and also various techniques of plant disease systems are analyzed with accuracy. Finally the various challenges in the recognition of plant leaf diseases are identified and listed.

#### Jeffrey Ullman Colloquium

Increasing the data privacy and security in Automotive system using Blockchain technology

Name: Mr. Balachander S

Supervisor Name: Dr. Murugan B

Date: 29/01/2022

The automotive sector has always kept a keen eye on new technologies in the hope of streamlining operations, introducing new end-user functionalities, drive revenue growth. Blockchain is the latest buzzword within the automotive industry. Over the last few years, this was used to transact cryptocurrencies such as Bitcoin. Research on blockchain and its applications in the vehicle platform is still at a nascent stage. With prevailing unfamiliarity of its potential benefits, this technology is still struggling to make inroads among the masses. However, this technology can solve some of the significant challenges of the vehicle platform industry, such as Peer-to-peer interactions, secure data transactions, Smart insurance, etc. As the industry continues to move towards connected and immutable, there is a pressing need to have seamless, secure, and immutable interaction. Therefore, our aim is to improve security in terms of traceable shared data-store and privacy.

#### Mitigation Cloud's vulnerabilities and improve the security using blockchain

Name: Mrs.Dina Zoughbi

Supervisor Name: Dr. Kavitha

Date: 11/02/2022

We will examine issues and concepts related to security in cloud computing, in particular data leakage and loss, as well as concepts related to the Internet of Things (IoT) and the cloud of things (CoT). Since computing plays an important role in our time, helping to connect everything anywhere, it has made the study of these concepts important. However, the presence of many loopholes and weaknesses in the control, prompted researchers to work on increasing security and protecting privacy in studying issues related to confidentiality. Through this article, we will discuss the factors that affect computing security and find current and future solutions. We also explain the relationship between IoT, CC, CoT, and the difference based on infrastructure and technology. Also a comprehensive and in-depth explanation of all computing related concepts to be highlighted.

#### Jeffrey Ullman Colloquium

#### **Edge computing in healthcare systems**

Name: Mr.Blessed Sam

Supervisor Name: Dr. Prakash M

Date: 25/02/2022

Edge computing application primarily focuses on the classification of health data involving vital sign monitoring and fall detection. For the latency and energy efficiency requirements to be met for a real-time collection and analysis of health data, an edge computing environment is the answer, combined with 5G speeds and modern computing techniques. Previous health care surveys have focused on new fog architecture and sensor types, which leaves untouched the aspect of optimal computing techniques, such as encryption, authentication, and classification that are used on the devices deployed in an edge computing architecture. This paper aims first to survey the current and emerging edge computing architectures and techniques for health care applications, as well as to identify requirements and challenges of devices for various use cases. To address these concerns, forward-thinking healthcare are moving to adopt edge computing, in which data is analysed and acted upon at the point of collection, or on a nearby system situated between the connected device and the cloud.

#### **Randomized Algorithms**

Name: Ms. Harshini Poojaa K

Supervisor Name: Dr. Ganesh Kumar S

Date: 12/03/2022

Randomized algorithms are such algorithms that make random choices during their executions. As a consequence, their outcomes do not depend only on their inputs. There are several important reasons why randomized algorithms are of increasing importance. Randomized algorithms are often faster either from the worst-case asymptotic point of view or/and from the numerical implementations point of view. They are often simpler than deterministic ones for the same problem. They have often more easily interpretable outputs, which is of interests in applications where analyst's time rather than just computation time is of interest. Nowadays, Randomized algorithms have been recently surprisingly successful when dealing with huge-data matrix computation problems. Las Vegas and Monte Carlo are the two main categories of Randomized algorithm. The running time of the Las Vegas Algorithm is probailistic whereas the correctness is certain which is vice-versa in the case of Monte carlo Algorithm.

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#### **Federated Learning in Healthcare**

Name: Mrs.Annapoorni

Supervisor Name: Dr. Saravanan P

Date: 19/03/2022

Federated Learning is simply the decentralized form of Machine Learning. Machine Learning algorithms, grab the data and train itself and finally predicts results for new data generated. Instead of forwarding information to a centralized server, the proposed technique provides simple prototype weights to the cloud service, which are then combined to give a higher optimization method, which is then sent out to the clients. To typically attain optimal outcomes, this developed model is then inter-organizationally trained because it does not breach assured privacy or data sharing.



## SRM Innovation Incubation and Entrepreneurship Centre



VR Flight simulator got Fund Rs.65K for prototype development

Young Entrepreneur: Mr. Pratik Mentor: Dr. R. Rajkumar, AP, DSBS.

About: Mr. Pratik is studying 9th standard in KRM Public School in Perambur, North Chennai. In this young age he is interested in doing many projects using VR, IoT, AI and so on. He got many prizes in state and National level hackathons.



Mr. Pratik has received Rs 10,000 for Defence Hackathon from SCO Chairperson Dr. Revathi Venkataraman





VR Flight Simulator Demo to Dr. T.K. Varadarajan, Nodal Officer, DGQA Facilitation Cell.

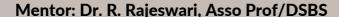


## SRM Innovation Incubation and Entrepreneurship Centre



OPTICAL HEAD MOUNTED DISPLAY got Fund Rs.1.8 L for prototype development

Team: Shivansh (IIIyr-NWC), Dhruv Sikka (IIIyr-NWC), Shashank Patel (IIyr- DSBS), Harsavardhan S (II yr- DSBS)



Our aim is to develop cost-effective smart glasses that are affordable for common people and ready-to-use for industries. It acts just like a smartwatch where it will serve as an extension of your phone and can access Alexa/Google and auto-response to the text messages. The user can capture, view images, play videos, listen to audio, and connect to the web media with respect to the small heads-up display mounted in front of one of the user's eyes.







Our product would be used to improve quality, standardize workflows, accelerate decision making, and enhance communication in logistics, manufacturing, and maintaining operations. We target the personal device usage market. Helping the buyer with faster and efficient online payments, personal healthcare tracking, increased work productivity therefore making our primary target as a personal assistance wellbeing sector.

Through audio and video capabilities, workers can interact with other colleagues and seek assistance on complex issues from experts within their organization anywhere on the globe. Such productivity gains improve the cost-effectiveness of supply chain operations, expedite issue troubleshooting, and reduce the number of quality errors.



## SRM Innovation Incubation and Entrepreneurship Centre



Smart Visor got Fund Rs.11.6K for prototype development

Team: Madhurya Mozumder (cloud), Omkareshwar Rai (cloud) & Amish Agarwal (cloud)

#### Mentor: Dr. R. Rajkumar, AP/DSBS

Our product comes exactly into this scenario to solve the problem of having a face shield and maintaining physical distancing. Our product is designed to be an easy to use, light and automated face shield, which is mounted on a cap, so that the weariness of long hours of wearing a face shield fastened with straps can be forgotten. Our device is designed to detect a person within a specified proximity and the face shield will automatically get deployed when the need arises. The product consists of a cap which has a deployable and retractable face shield which comes to action automatically when it detects a person .











The detection of the subject in front of the user is done by an array of sensors mounted on the cap itself. The sensor calibrated to detect the person in proximity of 6 feet and body temperature of the person. The product comes with a companion app which can be easily installed in smartphone. The sensors may be calibrated using the app. It also gives information about the number of people who have come into close vicinity, the location where the user meet them, the person's body temperature, and whether the person's body temperature is above the normal human body temperature, as well as whether the person has a fever, which is one of COVID19's determining factors. The mechanics in the hat sync with the app, allowing you to keep track of the individuals you meet. and also notifies you if the person has fever, hence providing a basic personal protection





Digital Marketing Training program at Arasampatti village





Virtual Reality workshop at BNMIT, Bangalore

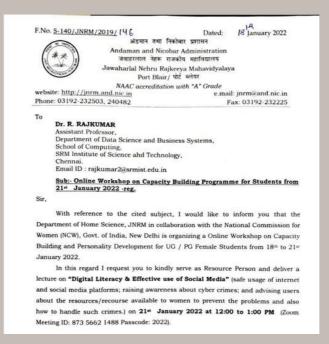




**Article about opportunities in Data Engineering - January 2022** 

Data Chronicle PAGE 37 April 2022





### Cyber awareness workshop to JNRM - Andaman Nicobar Islands



## Digital Literacy and Social Media workshop to Tamilnadu Teachers Education University



Article about education after pandemic - March 2022







Dr. P. Saravanan, Assistant Professor acted as a Jury in children's talent finding programme at Tambaram



Participated a debate show
in Vendhar TV
on Work from Office vs
Work from Home
on 27.02.2022

Given awareness talk

about 5G Technology

to Aadhan YouTube

Channel

on 05.02.2022





## Faculty in Cultural & Sports



DSBS Non -Teaching Faculty J.Divyalakshmi G. Ramyalekha and S.Karthika won 2nd prize in Rangoli, K. Bharathi and team received 3rd prize for Fashion walk in Women's day



Dr. S. Sudhakar and Dr. R. Rajkumar participated in faculty chess tournament

## Progressive Web Application

Progressive Web Apps make use of specific technologies and applications to combine the benefits of both the web and the app worlds. They provide a website-like user experience with interactive app-like capabilities. Progressive Web Apps (PWAs) use current APIs to provide greater functionality, dependability, and installability while reaching anybody, anytime, on any device with a single codebase. HTML, CSS, JavaScript, and other web app technologies are employed in a progressive web app.



It mimics the look and feel of a native app. In addition, unlike web apps, a PWA may take advantage of most device features such as push notifications regardless of the web browser being used. It provides such an integrated and smooth experience that distinguishing between a PWA and a native app is difficult. Some popular examples of PWA include Starbucks, BMW, MakeMyTrip, Pinterest, Trivago, Twitter Lite, Uber and Forbes.



Written By: Dr. V. Kavitha, Associate Professor, DSBS

## Don't Think Behind Closed Doors



Open innovation is already all around you. The top companies around the world have figured out how to use the wisdom of the crowd to help them create products and services that we use on a daily basis—from your smartphone apps to Wikipedia. Let us open innovation in.

We now move on to J.K Rowling whose story is the most notable inspiring success story ever. The person is responsible for the creation of Harry Potter, who is the most iconic and inspiring fictional character of all time.

J.K Rowling is one of the most renowned authors of our time. Everyone knows the fantastic world of Harry Potter today but not everyone knows about the person who brought that world into life. After the death of her mother, she moved to Portugal in order to teach English. She married a man there and had a daughter with him. However, after some time both of them parted ways and filed for a divorce. This was a turning point in her life as she moved to a different city with her daughter and three chapters of Harry Potter that she wrote before. J.K Rowling even suffered depression, anxiety during this time.

After about two years she finally completed Harry Potter which was rejected by 12 publications. Soon after, the book was accepted and published and the rest is history. Her story teaches her that no matter what life throws at us, the solution is always inside us.

"If you quit once, it becomes a habit. Never quit!" - Michael Jordan Courtesy: https://leverageedu.com/blog/inspiring-success-stories/



Dr. B. Amutha SCO-Newsletter –Head

## **BLENDER**



What is Blender? It's not a juice-making machine, at least not the one I'm talking about here. Blender is the software that artists worldwide use to create animations, 3D models, art, and so much more. It is one of the most widely recognized 3D design applications known in the computer world. Being freely available, Blender is widely used in every aspect of animation. It is basically a free and open-source 3D modelling and animation suite. If that was a mouthful, then simply put, it is a computer graphics program that allows you to produce high-quality still images and animations using three-dimensional geometry.

#### An overview of graphic design.

For a long time, there were no good, and more importantly, free alternatives for graphic designing. Animations and computer-generated 3D graphics used to be a thing that only high-budget television shows and a few feature films used. Quick fast-forward to the current decade, and now almost every major film and television show involves some kind of 3D computer graphics and animation. People can now make insane animations right from their beds.

Not just TV and film, 3D graphics have found their way into every industrial sphere possible. Be it video games, or medical models, animations have become a core part of all facets of the computerized world.

What sets blender apart from the rest of the bunch, what makes it shine so bright, is the fact that it's entirely (and I'm not exaggerating) free of cost. Unlike most programs, where the source code is heavily fortified, you even have the freedom to view AND modify the source code for Blender. This way, it is always evolving, with the help of artists and coders and even non-programmers all around the globe.

Blender is an excellent application for small animation studios, freelance 3D artists, independent filmmakers, students learning 3D computer graphics, and committed computer graphics enthusiasts because of its strengths.





#### Making games and movies with Blender.

The coolest thing about Blender is that it is only limited by imagination. It has such a wide range of features that even seasoned users will find something new every once in a while. And the only limitation is your machine. But that is not a thing to worry about, as Blender comes with optimizations and features that will manage to get the work done on even a basic PC (not so basic as to not have a graphics card though).

Blender ships with Cycles, a traditional but insanely powerful ray tracer rendering engine, that would usually cost you hundreds (in dollars!). That reason alone makes Blender stand tall and proud as one of the best 3D graphics applications.

With support for transparency, hair and water particles, render passes, accurate sculpting, voxel remeshing, cloth animation and so much more that I possibly cannot fit them into this article, Blender cannot be missed by any 3D artist, beginner or seasoned.

Are you a 2D artist, a 3D artist, a game developer, or probably from any of the tons of fields affiliated with graphic design? Blender is the one and only stop you would need to consider. Did I miss Virtual Reality or VFX by any chance? Because, oh, Blender does that too!



#### Should I go with Blender?

But no computer application is 100% perfect. Blender comes with its pros and cons, but the pros outweigh the cons, and that is what makes it a top choice. It might work wonders for you as well. Even if it may not be your primary application of use, it's worth including in your toolset. Being open-source, it has no barriers to stop new artists from joining the community. It's certainly something every artist should consider.



Written By: Siddhant Naik, 2nd year CSE (Gaming Technology)

Data Chronicle PAGE 44 April 2022

## Gallery



## **DSBS Faculty**



Gallery

## Taiwan - India Joint Research Lab on Big Data Analytics - Faculty Research Group



Resource Persons @ Game Developer Community Club



Data Chronicle PAGE 46 April 2022

## Data Chronicle Editor's Message



#### Dear Associates,

A day of dawn takes us to walk through the meadows of our one day life. It is giving pleasure to be the Newsletter Editor with the passionate team of Data Chronicle and it is an adorable moment to have the third edition for the quarter of January- April 2022.

It is no epiphany to say that we live in a remarkably interconnected world. Our nature of work is required with and by the faculties' desire for intellectual and research partnerships to solve the important questions of looking in front of us hand -folded. Further, our institutions are required by societal demands to look to others outside our own countries or regions to go as a forerunner to serve the community confronting the global issues.

In this issue, we will showcase the initiatives of new clubs, patent grants of our faculty members, Alumni meetings, Hackathons, publications, International conferences, and women's day celebrations. The members of DSBS rely on belief and hard work cultured from our Chair Person –SCO, Dr.Revathi Venkatraman to establish a new trend towards innovation and inculcate efficient practices towards that since the end of December 2021 until the 1st quarter of 2022.

The students, faculty members, Research Scholars and too the PhD Supervisors of the department are devotedly executing their tasks under the Eminent leadership of Dr. Lakshmi, to bring laurels to the department so as to make the sky shine even in dark moments.

A very big thanks to all the persons who contributed in all the activities, conducted events, special events, participated and innovated and also writing the wonderful and inspiring articles, because of them the newsletter is in your hands now.

I am always grateful to our Higher Authorities and the board members for their unending support and timely help throughout all our efforts, where Our institutions are, to a greater extent, global and we each struggle to determine how best to relate to the universities outside of our home country.

This is time for everyone to get connected internationally, as the globe is in fraction of seconds as 5G/6G is concerned. As our hands are tied in this unprecedented time, I hope our brains and minds also travel in the direction of success beyond Horizons.

Dr. B. Amutha SCO-Newsletter –Head



# DATA CHRONICLE EDITORIAL TEAM



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Nikhil unnikrishnan 3rd year CSBS



Shivaraman Ramakrishnan 3rd year CSBS

# 断遗遗的 Tirukkural

குறள் 684



அறிவுரு வாராய்ந்த கல்விஇம் மூன்றன் செறிவுடையான் செல்க வினைக்கு

#### விளக்கம்:

இயல்பான நல்லறிவு, காண்பவர் விரும்பும் தோற்றம், பலரோடும் பலகாலமும் ஆராய்ந்த கல்வி இம்மூன்றையும் நிறையப் பெற்றுச் சொல்ல வேண்டியதைத் தானே எண்ணிச் சொல்லும் திறம் படைத்தவன் தூதர் பணிக்குச் செல்க

## Meaning:

Sense, goodly grace, and knowledge exquisite. Who hath these three for envoy's task is fit.

- Tiruvalluvar (2000 Years ago)

# DATA **CHRONICLE**

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## **FDITORIAL TEAM**

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