

# SCHOOL OF INFORMATION TECHNOLOGY & ENGINEERING - IN~SITE

THE OFFICIAL QUARTERLY NEWSLETTER

#### Contents:

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# **EDITORIAL**

Dear Readers.

Warm Greetings!!

This quarter has been extremely vibrant being engaged with various activities, events, achievements by our ever enthusiastic faculty members and motivated students. This issue of IN-SITE 2022 highlights their contributions in the field of Information Technology & Engineering and also the academic community at large.

It is an extreme pride for VITians that our Institute is included within the Top 601-700 Universities of the World and in the Top 2-3 in India by the Academic Ranking of World Universities (ARWU), Shanghai Ranking, 2022. Shanghai Ranking as one of the top three prestigious university ranking agencies of the world.

At the outset, we also congratulate Mr. Jayamurthi M who has represented India & won the Gold Medal in Commonwealth Power lifting Championship held at New Zealand. We also highlight the glorious achievements of our students in various Hackathon events.

We heartily congratulate eight of our faculty members who have been included in the Top 2% Scientists by Stanford University and Elsevier, published on October 19th, 2021.

This issue also collates the various in-house activities and lecture sessions organized by our school. The most highlighted event was the transnational partners meeting & Two-Day International Workshop of DIVERSASIA, which was conducted with the esteemed participation of international and national collaborators.

The various publications, consultancy projects and invited talks delivered by our faculty members are also presented in this issue which depict their enormous sincerity towards academics and research.

We sincerely hope that this newsletter will enable exchange of knowledge and professional information thereby act as a genuine reflection of the accomplishments our school.

We wish you all a very Happy Reading!!

Dr. Sumathy S
Professor & Dean
School of Information Technology & Engineering
Vellore Institute of Technology, Vellore
Email: dean.site@vit.ac.in

# STUDENTS' ACHIEVEMENTS



Pritish Gupta, MA Rahul & Aditya Raj (B.Tech - IT) Team - Code Brigade Won the Runners Up Position in Flipkart Grid 4.0 Information Security Hiring Challenge



JAYAMARUTHI. M (BCS) Represented India & won the Gold Medal in Commonwealth Power lifting Championship held at New Zealand.



Mathiharan T (M.Tech - SE) Got Enlisted in Nvidia Official video for NVIP, 2022





Venkata Sai Sankar (B.Tech - IT)



(B.Tech - IT)



Sriesh Agrawal Thejineaswar Guhan (B.Tech - IT)

Won the International Hackathon organized by Remotebase. Received a prize of 6000 USD



Yuvraj Singh Deora (M.Tech - SE)



(B.Tech - CS)



Khushboo Nijhawan Aaditry Choudhury (B.Tech - CS)



Hrithik Purwar (B.Tech - CS)

Team - "Name Doesn't Matter" won 2nd Runner Up position in HackStack Hackathon by InfraStackLabs, conducted in Bangalore

# **FACULTY ACHIEVEMENTS**



Top 2% Scientists by Stanford University and Elsevier



Dr. Aswani Kumar Chrukuri



Dr. Usha Devi G



Dr. Thippa Reddy G



Dr. Chiranji Lal Choudhary



Dr. Praveen Kumar Reddy



Dr. Senthil Kumar Mohan



Dr. Sweta Bhattacharya



Dr. Harold Robinson

# FACULTY ACHIEVEMENTS

#### **Consultancy Projects:**



Project Title	Consultancy Agency	Faculty
Development a Robust Deep Neural Network for Atrial Fibrillation Detection	University of Hail, Saudi Arabia	Prof. Thippa Reddy G Prof. Rajeswari C Prof. Nancy Victor Prof. Sweta Bhattacharya Prof. Praveen Kumar Reddy M
AWS and Relevant Technology Training	DigitalT3 Software Solutions Ltd. , Vellore India	Prof. Siva Rama Krishnan S Prof. JayaKumar S Prof. Nallakarupan M K Prof. Srinivas Koppu Prof. Sweta Bhattacharya Prof. Senthil Kumaran U
Mathematical Epidemic Modeling & Forecasting of COVID 19 Using Deep Learning Techniques	King Abdulaziz City for Science & Technology, Advanced Manufacturing Institute, King Saud University, Saudi Arabia	Prof. Neelu Khare
Tool for identification of Paper Citation	KAS Innovative India Pvt Ltd	Prof. Gitanjali J Prof. Karthikeyan J
Blue cross blue shield - Health Insurance	Perficient India Pvt Ltd.	Prof. Vanmathi C
Blue cross blue shield - Health Insurance	Perficient India Pvt Ltd.	Prof. Sumaiya Thaseen I
Blue cross blue shield - Health Insurance	Perficient India Pvt Ltd.	Prof. Priya V
Handling Customer Data Securely Using New Technologies	MK Systems and Holding Solutions	Prof. Prasanna S Prof. Navaneethan C
Improving Crash Recovery from Web Databases	MK Systems and Holding Solutions	Prof. Sumangali K Prof. Asha N
Tool for Identification of Paper Citation	KAS Innovative India Pvt Ltd	Prof. Pounambal M Prof. Sumathy S Prof. Dhinesh Babu L D Prof. Gitanjali J
Deep Learning Based Model for Detecting the Employees Activities in Working Environment	Nigus System Pvt. Ltd	Prof. Uma K Prof. Iyapparaja M

#### Patent Filed and Published:

Patent Title	Faculty
	Prof. Rahamathunnisa U Prof. Akash Mohanty (SMEC)

# **FACULTY ACHIEVEMENTS**

#### Invited Talks



#### Deep Learning and its Applications:

Prof. Lawanyashree M - Keynote Speaker, in ACM Webinar, ACM Professional Chapter, Don Bosco College, Yelagiri Hills, Tirupattur





- Recent Trends in Machine Learning -Keynote Speaker in ICCIML, Geethanjali College of Engineeringa and Technology, Hyderabad
- Leveraging the Potential of Machine Learning in the Real World - Keynore Speaker in Public Lecture Series, Coal City University, Enugu, Nigeria
- Blockchain Technology & its Applications -Invited Speaker at ChhotuBhai GopalBhai Patel Institute of Technology, Gujarat



#### Role of Information Technology in Business Sector

Prof. Harshita Patel - Expert Series Talk on Enhancing Employability Skills for Budding Engineers



#### **Cyber Security:**

Prof. Selva Rani B - International Conference on Recent Trends in Innovation and Technology, Patrician College of Arts and Science, Chenna**i** 



#### **ICT in Real Time:**

Prof. Sujatha R - IFEST 2022, State Level Intercollegiate Competition, Auxillium College, Vellore



# FACULTY PUBLICATIONS (July 2022)

Author (s)	Paper Title	Journal Name	Impact Factor
Alazab M., Gadekallu T.R., Su C.	Guest Editorial: Security and Privacy Issues in Industry 4.0 Applications	IEEE Transactions on Industrial Informatics	11.648
Rahaman Z.A., Kafy AA., Saha M., Rahim A.A., Almulhim A.I., Rahaman S.N., Fattah M.A., Rahman M.T., S K., Faisal AA., Al Rakib A.	Assessing the impacts of vegetation cover loss on surface temperature, urban heat island and carbon emission in Penang city, Malaysia	Building and Environment	7.093
Shakeel T., Habib S., Boulila W., Koubaa A., Javed A.R., Rizwan M., Gadekallu T.R., Sufiyan M.	A survey on COVID-19 impact in the healthcare domain: worldwide market implementation, applications, security and privacy issues, challenges and future prospects	Complex and Intelligent Systems	6.700
Butt U.A., Amin R., Aldabbas H., Mohan S., Alouffi B., Ahmadian A.	Cloud-based email phishing attack using machine and deep learning algorithm	Complex and Intelligent Systems	6.700
Yogesh M.J., Karthikeyan J.	Health Informatics: Engaging Modern Healthcare Units: A Brief Overview	Frontiers in Public Health	6.461
Rupa C., Srivastava G., Ganji B., Tatiparthi S.P., Maddala K., Koppu S., Chun-Wei Lin J.	Medicine Drug Name Detection Based Object Recognition Using Augmented Reality	Frontiers in Public Health	6.461
Ali T.M., Nawaz A., Ur Rehman A., Ahmad R.Z., Javed A.R., Gadekallu T.R., Chen CL., Wu CM.	A Sequential Machine Learning-cum- Attention Mechanism for Effective Segmentation of Brain Tumor	Frontiers in Oncology	5.738
Ramana K., Kumar M.R., Sreenivasulu K., Gadekallu T.R., Bhatia S., Agarwal P., Idrees S.M.	Early Prediction of Lung Cancers Using Deep Saliency Capsule and Pre-Trained Deep Learning Frameworks	Frontiers in Oncology	5.738
Boobalan P., Ramu S.P., Pham Q,-V., Dev K., Pandya S., Maddikunta P.K.R., Gadekallu T.R., Huynh-The T.	Fusion of Federated Learning and Industrial Internet of Things: A survey	Computer Networks	5.493
Singh N., Gunjan V.K., Chaudhary G., Kaluri R., Victor N., Lakshmanna K.	IoT enabled HELMET to safeguard the health of mine workers	Computer Communications	5.047
Roy P.K., Singh A., Desai J.V., Singh S.K.	Healthcare Data Security Using Lightweight Protocol for Cyber Physical System	IEEE Transactions on Network Science and Engineering	5.033
Manikandan N.S., Kaliyaperumal G.	Collision avoidance approaches for autonomous mobile robots to tackle the problem of pedestrians roaming on campus road	Pattern Recognition Letters	4.757
Wang W., Han Z., Alazab M., Gadekallu T.R., Zhou X., Su C.	Ultra Super Fast Authentication Protocol for Electric Vehicle Charging Using Extended Chaotic Maps	IEEE Transactions on Industry Applications	4.079
Lakshmanna K., Subramani N., Alotaibi Y., Alghamdi S., Khalafand O.I., Nanda A.K.	Improved Metaheuristic-Driven Energy- Aware Cluster-Based Routing Scheme for IoT-Assisted Wireless Sensor Networks	Sustainability (Switzerland)	3.889
Javed A.R., Hassan M.A., Shahzad F., Ahmed W., Singh S., Baker T., Gadekallu T.R.	Integration of Blockchain Technology and Federated Learning in Vehicular (IoT) Networks: A Comprehensive Survey	Sensors	3.847

# FACULTY PUBLICATIONS (July 2022)

Author (s)	Paper Title	Journal Name	Impact Factor
Babu J.C., Kumar M.S., Jayagopal P.,	IoT-Based Intelligent System for Internal Crack Detection in Building Blocks	Journal of Nanomaterials	3.791
Yadav A., Joshi D., Kumar V., Mohapatra H., Iwendi C., Gadekallu T.R.	Capability and Robustness of Novel Hybridized Artificial Intelligence Technique for Sediment Yield Modeling in Godavari River, India	Water (Switzerland)	3.530
Jain S., Roy P.K.	E-commerce review sentiment score prediction considering misspelled words: a deep learning approach	Electronic Commerce Research	3.462
Anbarasi A., Ravi T., Manjula V.S., Brindha J., Saranya S., Ramkumar G., Rathi R.	A Modified Deep Learning Framework for Arrhythmia Disease Analysis in Medical Imaging Using Electrocardiogram Signal	BioMed Research International	3.246
Gupta S., Kalaivani S., Rajasundaram A., Ameta G.K., Oleiwi A.K., Dugbakie B.N.	Prediction Performance of Deep Learning for Colon Cancer Survival Prediction on SEER Data	BioMed Research International	3.246
Humayun M., Sujatha R., Almuayqil S.N., Jhanjhi N.Z.	A Transfer Learning Approach with a Convolutional Neural Network for the Classification of Lung Carcinoma	Healthcare (Switzerland)	3.160
Tripathy B.K., Reddy Maddikunta P.K., Pham QV., Gadekallu T.R., Dev K., Pandya S., Elhalawany B.M.	Harris Hawk Optimization: A Survey onVariants and Applications	Computational Intelligence and Neuroscience	3.120
Dutta A.K., Mageswari R.U., Gayathri A., Dallfin Bruxella J.M., Ishak M.K., Mostafa S.M., Hamam H.	Barnacles Mating Optimizer with Deep Transfer Learning Enabled Biomedical Malaria Parasite Detection and Classification	Computational Intelligence and Neuroscience	3.120
Bhandari A., Tripathy B.K., Jawad K., Bhatia S., Rahmani M.K.I., Mashat A.	Cancer Detection and Prediction Using Genetic Algorithms	Computational Intelligence and Neuroscience	3.120
Lakshmanna K., Kavitha R., Geetha B.T., Nanda A.K., Radhakrishnan A., Kohar R.	Deep Learning-Based Privacy-Preserving Data Transmission Scheme for Clustered HoT Environment	Computational Intelligence and Neuroscience	3.120
Kumar V., Biswas S., Rajput D.S., Patel H., Tiwari B.	PCA-Based Incremental Extreme Learning Machine (PCA-IELM) for COVID-19 Patient Diagnosis Using Chest X-Ray Images	Computational Intelligence and Neuroscience	3.120
Mohanrajan S.N., Loganathan A.	Novel Vision Transformer–Based Bi-LSTM Model for LU/LC Prediction—Javadi Hills, India	Applied Sciences (Switzerland)	2.838
Vinoth D., Prabhavathy P.	Automated sarcasm detection and classification using hyperparameter tuned deep learning model for social networks	Expert Systems	2.812
Chidambaram S., Ganesh S.S., Karthick A., Jayagopal P., Balachander B., Manoharan S.	Diagnosing Breast Cancer Based on the Adaptive Neuro-Fuzzy Inference System	Computational and Mathematical Methods in Medicine	2.809

# FACULTY PUBLICATIONS (July 2022)

Author (s)	Paper Title	Journal Name	Impact Factor
Shelatkar T., Urvashi D., Shorfuzzaman M., Alsufyani A., Lakshmanna K.	Diagnosis of Brain Tumor Using Light Weight Deep Learning Model with Fine- Tuning Approach	Computational and Mathematical Methods in Medicine	2.809
Lakshmanna K., Kaluri R., Gundluru N., Alzamil Z.S., Rajput D.S., Khan A.A., Haq M.A., Alhussen A.	A Review on Deep Learning Techniques for IoT Data	Electronics (Switzerland)	2.690
Sundar S., Sumathy S.	An effective deep learning model for grading abnormalities in retinal fundus images using variational auto-encoders	International Journal of Imaging Systems and Technology	2.177
Narayanan K.L., Krishnan R.S., Robinson Y.H.	IoT Based Smart Assist System to Monitor Entertainment Spots Occupancy and COVID 19 Screening During the Pandemic	Wireless Personal Communications	2.017
Sree Devi K.D., Karthikeyan P., Moorthy U., Deeba K., Maheshwari V., Allayear S.M.	Tumor Detection on Microarray Data Using Grey Wolf Optimization with Gain Information	Mathematical Problems in Engineering	1.430

# FACULTY PUBLICATIONS (August 2022)

Paper Title	Journal Name	Impact Factor
A Deep Multimodal Adversarial Cycle- Consistent Network for Smart Enterprise System	IEEE Transactions on Industrial Informatics	11.648
Energy efficient fault tolerance techniques in green cloud computing: A systematic survey and taxonomy	Sustainable Energy Technologies and Assessments	7.632
Color contour texture based peanut classification using deep spread spectral features classification model for assortment identification	Sustainable Energy Technologies and Assessments	7.632
Incentive techniques for the Internet of Things: A survey	Journal of Network and Computer Applications	7.574
A drone-based data management and optimization using metaheuristic algorithms and blockchain smart contracts in a secure fog environment	Computers and Electrical Engineering	4.152
A new blockchain and fog computing model for blood pressure medical sensor data storage	Computers and Electrical Engineering	4.152
An Efficient and Privacy- Preserving Scheme for Disease Prediction in Modern Healthcare Systems	Sensors (Basel, Switzerland)	3.847
Relevant-Based Feature Ranking (RBFR) Method for Text Classification Based on Machine Learning Algorithm	Journal of Nanomaterials	3.791
Multi-objective multi-verse optimizer based unsupervised band selection for hyperspectral image classification	International Journal of Remote Sensing	3.531
Implementation of Combined Machine Learning with the Big Data Model in IoMT Systems for the Prediction of Network Resource Consumption and Improving the Data Delivery	Computational Intelligence and Neuroscience	3.120
An Empirical Analysis of an Optimized Pretrained Deep Learning Model for COVID-19 Diagnosis	Computational and Mathematical Methods in Medicine	2.809
	A Deep Multimodal Adversarial Cycle- Consistent Network for Smart Enterprise System  Energy efficient fault tolerance techniques in green cloud computing: A systematic survey and taxonomy  Color contour texture based peanut classification using deep spread spectral features classification model for assortment identification  Incentive techniques for the Internet of Things: A survey  A drone-based data management and optimization using metaheuristic algorithms and blockchain smart contracts in a secure fog environment  A new blockchain and fog computing model for blood pressure medical sensor data storage  An Efficient and Privacy- Preserving Scheme for Disease Prediction in Modern Healthcare Systems  Relevant-Based Feature Ranking (RBFR) Method for Text Classification Based on Machine Learning Algorithm  Multi-objective multi-verse optimizer based unsupervised band selection for hyperspectral image classification  Implementation of Combined Machine Learning with the Big Data Model in IoMT Systems for the Prediction of Network Resource Consumption and Improving the Data Delivery  An Empirical Analysis of an Optimized Pretrained Deep Learning Model for COVID-19	A Deep Multimodal Adversarial Cycle- Consistent Network for Smart Enterprise System  Energy efficient fault tolerance techniques in green cloud computing: A systematic survey and taxonomy  Color contour texture based peanut classification using deep spread spectral features classification model for assortment identification  Incentive techniques for the Internet of Things: A survey  A drone-based data management and optimization using metaheuristic algorithms and blockchain smart contracts in a secure fog environment  A new blockchain and fog computing model for blood pressure medical sensor data storage  An Efficient and Privacy- Preserving Scheme for Disease Prediction in Modern Healthcare Systems  Relevant-Based Feature Ranking (RBFR) Method for Text Classification Based on Machine Learning Algorithm  Multi-objective multi-verse optimizer based unsupervised band selection for hyperspectral image classification  Implementation of Combined Machine Learning with the Big Data Model in IoMT Systems for the Prediction of Network Resource Consumption and Improving the Data Delivery  An Empirical Analysis of an Optimized Pretrained Deep Learning Model for COVID-19  IEEE Transactions on Industrial Informatics  Sustainable Energy Technologies and Assessments   Sustainable Energy Technologies and Assessments  Sustainable Energy Technologies and Assessments  Sustainable Energy Technologies and Assessments  Sustainable Energy Technologies and Assessments  Sustainable Energy Technologies and Assessments  Computation Intelligence and Neuroscience Mathematical Methods in Medicine

### FACULTY PUBLICATIONS (August 2022)

Author (s)	Paper Title	Journal Name	Impact Factor
Jayagopal P., Muthukumaran V., Koti M.S., Kumar S.S., Rajendran S., Mathivanan S.K.	Weather-based maize yield forecast in Saudi Arabia using statistical analysis and machine learning	Acta Geophysica	2.293
Shanmugapriya R., Santhosh Kumar S.V.N.	Comprehensive survey on data dissemination protocols for efficient reprogramming in Internet of Things	Concurrency and Computation: Practice and Experience	1.831
Subedi B., Sathishkumar V.E., Maheshwari V., Kumar M.S., Jayagopal P., Allayear S.M.	Feature Learning-Based Generative Adversarial Network Data Augmentation for Class-Based Few-Shot Learning	Mathematical Problems in Engineering	1.430
Roy P.K., Tripathy A.K., Singh S.K., Li KC.	Recent Advancements in Privacy-aware Protocols of Source Location Privacy in Wireless Sensor Networks: a Survey	Computer Science and Information Systems	1.170
Nandhini Abirami R., Durai Raj Vincent P.M., Rajinikanth V., Kadry S.	COVID-19 Classification Using Medical Image Synthesis by Generative Adversarial Networks	International Journal of Uncertainty, Fuzziness and Knowlege-Based Systems	1.027
Chakriswaran P., Vincent D.R., Kadry S.	Ensemble of Artificial Intelligence Techniques for Bacterial Antimicrobial Resistance (AMR) Estimation Using Topic Modeling and Similarity Measure	International Journal of Uncertainty, Fuzziness and Knowlege-Based Systems	1.027

# FACULTY PUBLICATIONS (September 2022)

	ODLICATION (SC	P	
Author (s)	Paper Title	Journal Name	Impact Factor
Thirunavukarasu R., C G.P.D., R G., Gopikrishnan M., Palanisamy V.	Towards computational solutions for precision medicine based big data healthcare system using deep learning models: A review	Computers in Biology and Medicine	6.698
Vyas A.H., Mehta M.A., Kotecha K., Pandya S., Alazab M., Gadekallu T.R.	Tear film breakup time-based dry eye disease detection using convolutional neural network	Neural Computing and Applications	5.102
Agrawal S., Sarkar S., Aouedi O., Yenduri G., Piamrat K., Alazab M., Bhattacharya S., Maddikunta P.K.R., Gadekallu T.R.	Federated Learning for intrusion detection system: Concepts, challenges and future directions	Computer Communications	5.047
Rehman M.U., Shafique A., Ghadi Y.Y., Boulila W., Jan S.U., Gadekallu T.R., Driss M., Ahmad J.	A Novel Chaos-Based Privacy-Preserving Deep Learning Model for Cancer Diagnosis	IEEE Transactions on Network Science and Engineering	5.033
Anup Kumar K., Vanmathi C.	Optimization driven model and segmentation network for skin cancer detection	Computers and Electrical Engineering	4.152
Ch A., Ch R., Gadamsetty S., Iwendi C., Gadekallu T.R.,	ECDSA-Based Water Bodies Prediction from Satellite Images with UNet	Water (Switzerland)	3.530
Kumar V.D.A., Raghuraman M., Kumar A., Rashid M., Hakak S., Reddy M.P.K.	Green-Tech CAV: Next Generation Computing for Traffic Sign and Obstacle Detection in Connected and Autonomous Vehicles	IEEE Transactions on Green Communications and Networking	3.525
Srinivasu P.N., Ijaz M.F., Shafi J., Wozniak M., Sujatha R.	6G Driven Fast Computational Networking Framework for Healthcare Applications	IEEE Access	3.476
Onesimu J.A., Karthikeyan J., Eunice J., Pomplun M., Dang H.	Privacy Preserving Attribute-Focused Anonymization Scheme for Healthcare Data Publishing	IEEE Access	3.476
Perumal K., Mohan S., Frnda J., Divakarachari P.B.	Dynamic resource provisioning and secured file sharing using virtualization in cloud azure	Journal of Cloud Computing	3.418
Almazroi A.A., Alamin H., Sujatha R., Jhanjhi N.Z.	A Web-Based Model to Predict a Neurological Disorder Using ANN	Healthcare (Switzerland)	3.160
Kumar V., Lalotra G.S., Sasikala P., Rajput D.S., Kaluri R., Lakshmanna K., Shorfuzzaman M., Alsufyani A., Uddin M.	Addressing Binary Classification over Class Imbalanced Clinical Datasets Using Computationally Intelligent Techniques	Healthcare (Switzerland)	3.160
Sangeetha S.K.B., Muthukumaran V., Deeba K., Rajadurai H., Maheshwari V., Dalu G.T.	Multiconvolutional Transfer Learning for 3D Brain Tumor Magnetic Resonance Images	Computational Intelligence and Neuroscience	3.120
Shanmugavadivel K., Sathishkumar V.E., Kumar M.S., Maheshwari V., Prabhu J., Allayear S.M.	Investigation of Applying Machine Learning and Hyperparameter Tuned Deep Learning Approaches for Arrhythmia Detection in ECG Images	Computational and mathematical methods in medicine	2.809
Palanivinayagam A., Panneerselvam R.K., Kumar P.J., Rajadurai H., Maheshwari V., Allayear S.M.	Analysis on COVID-19 Infection Spread Rate during Relief Schemes Using Graph Theory and Deep Learning	Computational and Mathematical Methods in Medicine	2.809
Nancy A.A., Ravindran D., Raj Vincent P.M.D., Srinivasan K., Gutierrez Reina D.	IoT-Cloud-Based Smart Healthcare Monitoring System for Heart Disease Prediction via Deep Learning	Electronics (Switzerland)	2.690

# FACULTY PUBLICATIONS (September 2022)

Author (s)	Paper Title	Journal Name	Impact Factor
Kandati D.R., Gadekallu T.R.	Genetic Clustered Federated Learning for COVID-19 Detection	Electronics (Switzerland)	2.690
Selvaraj N.P., Paulraj S., Ramadass P., Kaluri R., Shorfuzzaman M., Alsufyani A., Uddin M.	Exposure of Botnets in Cloud Environment by Expending Trust Model with CANFES Classification Approach	Electronics (Switzerland)	2.690
Agilandeeswari L., Meena S.D.	SWIN transformer based contrastive self- supervised learning for animal detection and classification	Multimedia Tools and Applications	2.577
Gupta V., Jain N., Sachdeva J., Gupta M., Mohan S., Bajuri M.Y., Ahmadian A.	Improved COVID-19 detection with chest x- ray images using deep learning	Multimedia Tools and Applications	2.577
Mathivanan S.K., Jayagopal P.	Utilizing satellite and UAV data for crop yield prediction and monitoring through deep learning	Acta Geophysica	2.293
Muthukumaran V., Natarajan R., Kaladevi A.C., Magesh G., Babu S.	Traffic flow prediction in inland waterways of Assam region using uncertain spatiotemporal correlative features	Acta Geophysica	2.293
Babu N., Santhosh Kumar S.V.N.	Comprehensive analysis on sensor node fault management schemes in wireless sensor networks	International Journal of Communication Systems	1.882
Zhan K., Chen N., Santhosh Kumar S.V.N., Kibalya G., Zhang P., Zhang H.	Edge computing network resource allocation based on virtual network embedding	International Journal of Communication Systems	1.882
Sangeetha S.K.B., Mathivanan S.K., Pandi T., Arivu Selvan K., Jayagopal P., Teshite Dalu G.	An Enhanced Triadic Color Scheme for Content-Based Image Retrieval	Mathematical Problems in Engineering	1.430
Rajmohan R., Kumar T.A., Julie E.G., Robinson Y.H., Vimal S., Kadry S., Crespo R.G.	G-Sep: A Deep Learning Algorithm for Detection of Long-Term Sepsis Using Bidirectional Gated Recurrent Unit	International Journal of Uncertainty, Fuzziness and Knowlege-Based Systems	1.027

# FACULTY PUBLICATIONS (October 2022)

Author (s)	Paper Title	Journal Name	Impact Factor
Saha M., Kafy AA., Bakshi A., Faisal AA., Almulhim A.I., Rahaman Z.A., Al Rakib A., Fattah M.A., Akter K.S., Rahman M.T., Zhang M., Rathi R.	Modelling microscale impacts assessment of urban expansion on seasonal surface urban heat island intensity using neural network algorithms	Energy and Buildings	7.201
Asha N., Syed Fiaz A.S., Jayashree J., Vijayashree J., Indumathi J.	Principal component analysis on face recognition using artificial firefirefly swarm optimization algorithm	Advances in Engineering Software	4.255
Alazab M., Khan L.U., Koppu S., Ramu S.P., M I., Boobalan P., Baker T., Maddikunta P.K.R., Gadekallu T.R., Aljuhani A.	Digital Twins for Healthcare 4.0 - Recent Advances, Architecture, and Open Challenges	IEEE Consumer Electronics Magazine	4.135
Manikandan S., Kaliyaperumal G., Hakak S., Gadekallu T.R.	Curve-Aware Model Predictive Control (C-MPC) Trajectory Tracking for Automated Guided Vehicle (AGV) over On-Road, In-Door, and Agricultural-Land	Sustainability (Switzerland)	3.889
Senthil Pandi S., Senthilselvi A., Gitanjali J., ArivuSelvan K., Gopal J., Vellingiri J.	Rice plant disease classification using dilated convolutional neural network with global average pooling	Ecological Modelling	3.512
Shanthi N., Sathishkumar V.E., Upendra Babu K., Karthikeyan P., Rajendran S., Allayear S.M.	Analysis on the Bus Arrival Time Prediction Model for Human-Centric Services Using Data Mining Techniques	Computational Intelligence and Neuroscience	3.120
Sangeetha S.K.B., Mani P., Maheshwari V., Jayagopal P., Sandeep Kumar M., Allayear S.M.	Design and Analysis of Multilayered Neural Network-Based Intrusion Detection System in the Internet of Things Network	Computational Intelligence and Neuroscience	3.120
Syamsundararao T., Selvarani A., Rathi R., Vini	An Efficient Signal Processing Algorithm for Detecting Abnormalities in EEG Signal	Contrast Media and Molecular Imaging	3.009
Saravanan S., Kumar V.V., Sarveshwaran V., Indirajithu A., Elangovan D., Allayear S.M.	Computational and Mathematical Methods in Medicine Glioma Brain Tumor Detection and Classification Using Convolutional Neural Network	Computational and Mathematical Methods in Medicine	2.809
Manikandan V.M., Murthy K.S.R., Siddineni B., Victor N., Maddikunta P.K.R., Hakak S.	A High-Capacity Reversible Data-Hiding Scheme for Medical Image Transmission Using Modified Elias Gamma Encoding	Electronics (Switzerland)	2.690
Gatti R., Arjun Kumar G.B., Sunil Kumar K.N.,Palle S., Gadekallu T.R.	Optimal resource scheduling algorithm for cell boundaries users in heterogenous 5G networks	Physical Communication	2.379
Venkatesh B., Babu J.C., Mathivanan S.K., Jayagopal P., Prasanna S.,Uddin M.S.	Influences of Aqueous Nanofluid Emulsion on Diesel Engine Performance, Combustion, and Emission: IoT (Emission Monitoring System)	Advances in Materials Science and Engineering	2.098
Subbiah S.S., Kumar S.P.	Deep Learning Based Load Forecasting with Decomposition and Feature Selection Techniques	Journal of Scientific and Industrial Research	0.555

# **SCHOLARS' ACHIEVEMENTS**



#### WINNERS OF RAMAN RESEARCH AWARD:

Ph.D. Registration Number	Name of Research Scholar	Guide
20PHD2024	Mr. Nagarajan B	Dr. Santhosh Kumar S V N
19PHD0548	Mr. M Sandeepkumar	Dr. Prabhu J
20PHD0630	Mr. K Dasaradharami Reddy	Dr. Thippa Reddy G
19PHD0494	Mr. Anup Kumar K	Dr. Vanmathi C
20PHD0284	Ms. Deepa P	Dr. Gunavathi C, SCOPE

#### PhD. Completions:



Ph.D. Registration Number	Name of Research Scholar	Guide
19PHD0283	Dr. Nandhini Abirami R	Dr. Durai Raj Vincent P M
11PHD0032	Dr. Balajee J	Dr. Saleem Durai M A, SCOPE
14MSR0032	Dr. Sangamithra A	Dr. Vani M P
14PHD0201	Dr. Preethi D	Dr. Neelu Khare
16PHD0112	Dr. Varun Chand H	Dr. Karthikeyan J
16PHD0518	Dr. Ganesh Viswanathan	Dr. Prabhu J
15PHD0028	Dr. Usha M	Dr. Usha Devi G

# **SCHOLAR SPEAKS**



Mrs. Jyothi P is currently a Research Scholar with the School of Information Technology and Engineering, Vellore Institute of Technology, Vellore, India. Her research interests include Deep Learning in Medical Image Processing. The pain and agony of patients suffering from chronic diseases motivated her to venture into medical disease detection techniques and related research. She hopes her research contributions will enhance the quality of disease diagnosis and touch the lives of suffering people.



Mrs. Y Supriya is currently a Research Scholar with the School of Information Technology and Engineering, Vellore Institute of Technology, Vellore, India. Environmental sustainability issues has always instigated her conscience and as an IT professional, she wanted to predict disasters so that lives of innocent commoners could be saved. Thus she is presently working on Federated Learning in Disaster Management.



Mrs. Amudha M is currently a Research Scholar with the School of Information Technology and Engineering, Vellore Institute of Technology, Vellore, India. Agricultural research and development is a crucial determinant of agricultural productivity and production which impacts food prices and economy of any country. This motivated her to pursue her research focusing on Deep Learning Implementations in the agriculture sector.

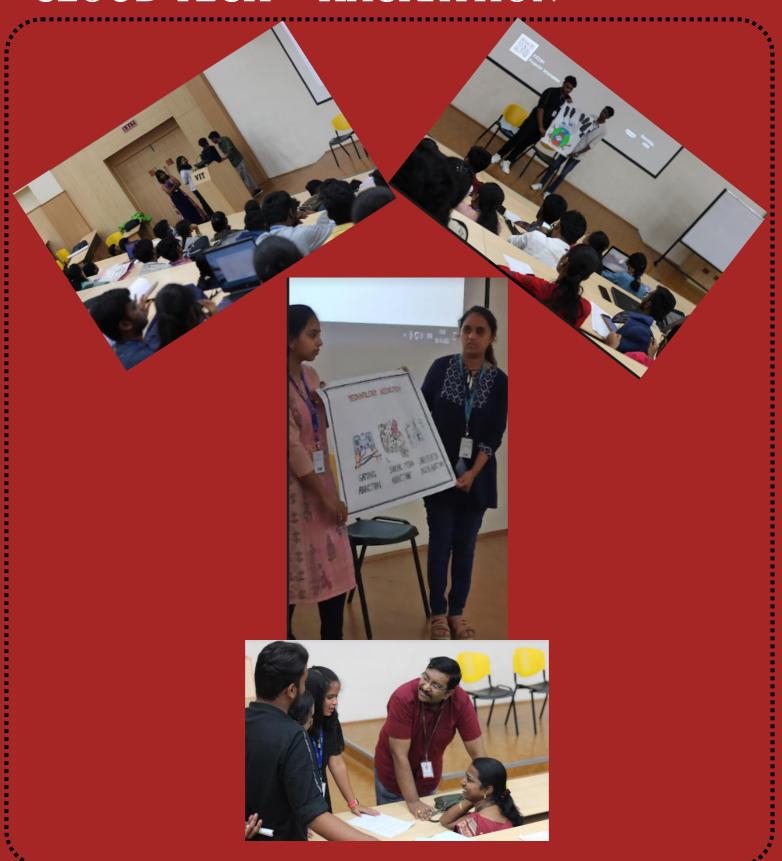


Mr. Maloth Sagar is currently a Research Scholar with the School of Information Technology and Engineering, Vellore Institute of Technology, Vellore, India. Blockchain makes global supply chains more efficient by allowing companies to complete transactions directly and without third parties. It also facilitates increased integration of financial and logistics services, enabling greater data collaboration between stakeholders. His current research area inclines with the same objective emphasizing on cyber security in cyber physical systems using deep learning techniques.

### **EVENTS**



# "CLOUD TECH" - HACKATHON



An outlet for students for tackling real life problems using cloud technologies, Showed the creative approach of students including their ideas and technology into their daily life. A class based activity which included Picture collages, charts, interviews and Video demos pertaining to real world usage of Cloud Computing

# INTERNATIONAL FACULTY VISTS AND PROGRAMMES





Dr. Palash Bera, Professor & Interim Associate Dean of Graduate Programs, Saint Louis University, United States was the Resource Person for the Workshop "Storytelling with Data"





Dr. Thuong Hoang, Associate Professor in School of Info Technology & Associate Head of School, Research, Deakin University, Australia delivered a talk on "Emerging Technologies – Jobs for the Future"



Dr. Michael Austin, Provost, University of Evansville
Dr. Ray Lutgring, Dean of the College of Arts and Sciences, University of Evansville,
Dr. Suresh, Associate Dean, School of Engineering and Computer Science & Professor of
Civil Engineering, University of Evansville visited SITE. They discussed about Students
Exchange Programme and related course/credit mapping

# INTERNATIONAL FACULTY VISTS

#### AND PROGRAMMES





Prof. David Joseph Brown, Dr. Mufti Mahmud & Dr. Pratik Vyas, Mr. Nick Shopland, Nottingham Trent University, UK explained the open challenges and various possibilities in collaborating with NTU.



Dr. Andrew Rau-Chaplin, Professor & Dean, Dalhousie University, Canada visited SITE and discussed collaborative opportunites and student exchange programmes



Delegates from National Infotech, Nepal visited SITE

#### **DIVERSASIA**



Embracing diversity in ASIA through the adoption of inclusive open practices 17th – 20th October 2022

Under the Erasmus+ European Commission



The 4th Transnational Meeting of the DiversAsia Project (618615-EPP-1-2020-1-UK-EPPKA2-CBHE-JP) was conducted at VIT Vellore, India on 17th - 18th October, Co-funded by the Erasmus+ Programme of the European Union. The participating collaborators were Nottingham Trent University - UK, IIT - Bhubaneswar, India, Bangladesh University of Engineering and Technology - Bangladesh, Jahangirnagar University - Bangladesh, Plovdiv University - Bulgaria, Gazi University - Turkey, University of Latvia - Latvia, SoftQNR - Serbia, NARHU - Bulgaria, PhoenixKM BVBA - Belgium







MoU was signed by Chancellor Dr. Viswanathan G, Vice President Shri Sankar Viswanathan with University of Plovdiv, Bulgaria

#### **DIVERSASIA**



A Two-Day International Workshop on "Role of Assistive Technologies to Enhance the Standards in Higher Education for Disabled Learners" as part of the DiversAsia Project (618615-EPP-1-2020-1-UK-EPPKA2-CBHE-JP), Co-funded by the Erasmus+ Programme of the European Union on October 19th -20th, 2022







The Chief Guest was Shri Ramaswamy Dharmarajan Iyer, Joint Secretary Level
Directir in DMEO, NITI Aayog, New Delhi and Guest of Honor was Prof. David Brown,
Nottingham Trent University, UK



The Workshop was organized by Prof. Rajesh Kaluri, Prof. Thippa Reddy G, Prof. Dharmendra Singh Rajput & Prof. Kuruva Lakshmanna,

Number of participants for the workshop were 71 (International – 24,

IIT Bhubaneswar – 2, VIT – 45).

#### WORKSHOPS/WEBINAR/VAP/FDPs



Event	Resource Person	Title
FDP	<ul> <li>Mr. Sai Sathish, Indian Servers</li> <li>Mr. Dinesh Paranthangan, HackUp Technology</li> <li>Mr. Sundarraman, M2p Fintech</li> <li>Prof. A.Balaji Ganesh, IP Ever LLP</li> </ul>	Know your Cyberspace - Practical Cybersecurity
FDP	<ul> <li>Prof. Millie Pant, Professor, IIT Roorkee</li> <li>Prof. Ram Bilas Pachori, Professor, IIT, Indore</li> <li>Prof. Munesh Singh, Assistant Professor, IIITDM, Jabalpur</li> <li>Prof. Pradeep Kumar Roy, Assistant Professor IIIT, Surat</li> <li>Prof. Ruchi Garg, Associate Professor, Lloyd Business School, Noida</li> <li>Prof. Ruchi Garg, Associate Professor, Lloyd Business School, Noida</li> <li>Prof. Uma V, Assistant Professor, Pondicherry University</li> <li>Prof. Surendiran B, Associate Professor, Pondicherry University</li> <li>Prof. Malay Kumar Nath, Assistant Professor, NIT Puducherry</li> <li>Mr. Mohanraj Vengadachalam, Machine Learning Lead, Standard Chartered GBS, Chennai</li> <li>Prof. B. K Tripathy, Higher Academic Grade, SITE, VIT Vellore</li> <li>Prof. Usha Devi G, Associate Professor, VIT Vellore</li> <li>Prof. Thippa Reddy G, Associate Professor, VIT Vellore</li> </ul>	Application of Machine Learning in Post Pandemic Era
Live Webinar Series	Prof. P D D Dominic, University Teknologi PETRONAS, Malaysia	Multi-Criteria Decision-Making Techniques
Live Webinar Series	Prof. Emelia Akashah, University Teknologi PETRONAS,Malaysia	Introduction to Data Analytics and Data Quality
Live Webinar Series	Prof. Tang Jung Low, University Teknologi PETRONAS,Malaysia	Internet of Things - IOT
Value Added Course	<ul><li>Prof. M Pounambal, VIT, Vellore</li><li>Prof. J Gitanjali, VIT, Vellore</li></ul>	Cyber Security & Software Defined Networking
Value Added Course	<ul><li>Prof. Vanmathi C</li><li>Prof. Mangayarkarasi R</li></ul>	Robotic Process Automation
Workshop	<ul><li>Prof. Vanitha M, VIT, Vellore</li><li>Prof. Parimala M, VIT, Vellore</li></ul>	Faculty Orientation Programme
Webinar	<ul> <li>Prof. Dhanapal A , Dell EMC, Bangalore</li> <li>Mr. Bharath, Dell EMC, Bangalore</li> </ul>	Cloud Computing and Cutting Edge Technologies
Seminar	<ul><li>Prof. Jayalakshmi P, VIT, Vellore</li><li>Prof. Vanitha M, VIT, Vellore</li></ul>	Tips & Tricks of Writing a Good Research Paper



Title	Resource Person
Before the Next Big Step:Bird's Eye View	Ms. Saikiran Chandha
Artificial Intelligence and Cyber Security Applications	Prof. Adem Tekerek
The Road Map for Final Year Project - A Case Study on Speech	Prof. S Pavankumar Dubagunta
Recent Trends in Cyber Security - A Case Study on Ransomware Attacks"	Mr. Neelanjan Manna
Software Project Management - An Industry Perspective	Mr. Selvaraju N
Industry Applications of Storage Systems	Mr. G S Ramkumar
Cyber Security Threats to Internet of Things and Service Domains	Mr. V N Prem Anand
Software Metrics - An Industry Perspective	Mr. Selvaraju N
Living Beyond the stress	Mr. Ashwini Purushothaman
Data Analytics of IOT	Mr. Sivasankari K
Explainable AI and Open Challenges - Research Perspective	Prof. Hemant Palivela
Handling Big Data in Real Life Challenges	Mr. Rajat Chaudhary
IOT for Smart Agriculture	Mr. Ferdin Joe John Joseph
Mobile App Development: An Insustrial Perspective	Mr. Vasanthakumar D
Industrial usecases using Ota in Internet of Things	Mr. Jayasakthi K
Advancement in Healthcare Revenue Cycle Systems	Mr. Umashankar Marimuthu
Big Data Analytics	Ms. Swato Anand
Applications of JAVA - Industry Perspective	MrSomashakar Kannan
Career Counselling for three year UG Students(BCA)	Mr. Sivabalan U
Career Counselling for three year UG Students(B.Sc. CS)	Mr. Sivabalan U



Title	Resource Person
Applications Of Automata In Information Technology	Mr. Mohammed Farooq Abdulla
Unified Threat Management And Utility Tools For Information Security	Mr. V N Prem Anand
For Ooad: Pragmatic-Driven Approach For Object-Oriented Analysis And Design - An Industry Perspective	Mr. Ramkumar G.S
Cloud Computing and Cutting Edge Technologies	Prof. Dhanapal A Mr. Bharath
Emerging Trends in Network Security and its Application	Mr. Soma Shakar K
Contemporary Industrial Trends In Computer Networks	Mr. Mohammed Farooq Abdulla
Industry Perspective - Quality Based Object Oriented Software Reuse	Mr. Abdul Aleem H,
Re-Inventing Decision Making With Ai Powered Data	Mr. Monish K. N.
GPU Architectures And Computing	Mr. Thanikachalam Mannangatti
Life Skills and Social Entrepreneurship	Mr. R. Sathishraj
Recent Trends In Operating Systems For High Performance Computing	Mr.Thanikachalam Mannangatti
Transforming Your Connected World With 5G-Advanced And Beyond	Prof. Biswapratap Singh Sahoo
Open Source Content Management System	Mr. Ganesan P
Data Mining With Lean Concept In Banking Industry	Ms. Lydia Sherly
An Industrial View Of Reactjs Frontend Development Technology	Mrs. Tharani Kamalakannan
Impact Of Data Mining And Streamline Business Process Using Six Sigma	Ms. Lydia Sherly
Object Oriented Analysis And Design In Industries	Mr.Ramesh V J



Title	Resource Person
Testing Strategies For Next Generation Software	Mr. Vasanthakumar Dhandpani
Software Testing: An Industry Perspective	Mr. Santhosh Tuppad
Industry Driven Best Practices On Database Design	Ms. Aruna Thiruvenkatarajan
Optimization And Artificial Intelligence Techniques	Prof. D.P. Kothari
Communication Systems In Industry Standard 4	Mr. Jeevananth K
Industrial Application of Communication Systems	Mr. Jeevananth K
Software Security Challenges In Industry Perspective	Mr. Abdul Aleem H
ERP Best Practices	Mr. Surya Narayana Reddy
ERP In Smart Manufacturing Process	Mrs. Muthazhagi G
IT Industry Needs You	Mr. G S Ramkumar
Effectively Managing The Unknowns Of Project A Practitioners View	Mr. Anil Kant Choudhary
Digitalization In Startup Ecosystem	Mr. Meet Zaveri
Artificial Intelligence In Web Development	Mr. Ganesan P
Industrial Application of AI and its Demonstration	Prof. Mohanraj Vengadachalam
DevOps - An Industry Perspective	Mr. Jerun Jose Stanley
Networks in an Industry Perspective	Mr. Sathyamoorthy
Agile and its applications in industry perspective	Mr. Suresh Sakthivel
Optimization and Artificial Intelligence Techniques	Prof. D P Kothari
Emerging Trends in M - Commerce	Mr. Somashakar Kannan
Microsoft Azure Services	Mr. Abdul Rasheed Feroz Khan



Title	Resource Person
Application of Data Mining in Supply Chain Management	Prof. Manavalan Ethirajan
Industrial Applications of Microprocessors and Microcontrollers	Prof. K Subramanian
Role of Deep Learning in Soft computing	Mr. Surya Prakash R
Role of Soft Comuting in Biometrics	Mr. Surya Prakash R
A Roadmap On Java Microservices	Mr. Vivek Ravikumar
Opportunity Sensing	Mr. Debashish Sakunia
Key trends in cloud computing innovations and applications Development	Mr. Balaji S K
Pattern Oriented Software Development Process in Industries	Mr. Gurunatha Prasad V
Full Stack web development with NodeJS, Express and MongoDB	Mr. Ganesan Perumalsamy
Front - End Web Development with React	Mr. Ganesan Perumalsamy



#### **EXPERT FOREIGN LECTURES**

#### (July - October 2022)

Advancement in Healthcare Revenue

Cycle Systems

Big Data Analytics



Mr. Umashankar Marimuthu

Ms. Swato Anand

Payer Provider Group, AMESA Region, IQVIA, Dubai, United

Arab Emirates

Microsoft, USA

### **EXPERT FOREIGN LECTURES**



Title	Resource Person	Institute / Organization
Breast Cancer Challenges In Integrative Analytics	Prof. Priyalakshmi Narayanan	University College London, UK
Software Testing Practices In Industry	Mr. Manivannann Karuppaiyah	Infosys Technologies, Sydney, Australia
Automation on Software testing in Industry Perspective	Mr. Manivannann Karuppaiyah	Infosys Technologies, Sydney, Australia
Scaling Agile With Enterprise Frameworks-Devops	Prof. Winston Gonzalez, D.M	Harrisburg University Of Science And Technology, Maryland, United State
Emerging Technologies - Augmented Reality & Virtual Reality	Prof. Thuong Hoang	Deakin University, Australia
Design Thinking	Prof. Manoranjitham Muniandy	Department of Computer Sciences, University Tunku Abdul Rahman, Malaysia
Security In Iot: Challenges And Solutions	Prof. Feslin Anish Mon	Department of University Of Technology And Applied Science, Sultanate Of Oman
Iot Security Testing With Raspberry PI	Prof. Thirumurugan Shanmugam	College of Applied Sciences Sohar
Role of Artifical Intelligence and Ubiquitous computing in Digital Health	Prof. Shweta Ware	Richmond University, USA
Role of Assistive Technologies to enhance for Disabled Learners	Prof. David Brown	Computing and Informatics Research centre, NTU, UK
Reliable Iot Architectures With Machine Learning Against Cyberattacks	Prof. Mahmoud Elsisi	National Kaohsiung University Of Science And Technology, Taiwan
An Industrial View Of Reactjs Frontend Development Technology	Mrs. Tharani Kamalakannan	Engineering ITS GmbH, Wolfsburg
Tear Proteomic Analysis	Prof. Hong Lin	University of Houston- Downtown, USA

#### **EXPERT FOREIGN LECTURES**



Title	Resource Person	Institute / Organization
Testing in Image Fusion and its Challenges	Prof. M. Shanmugasundaram	Department of Computer Science, College of Computer Science & Information System, Jazan University, Jazan.
Revisiting Key Distribution in Wireless Sensor Networks	Prof. Sriram Chellappan	University of South Florida in Tampa, Florida.
Role of Assistive Technologies to enhance the standards in Higher Education for Disabled Learners	Prof. David Brown	Nottingham Trent University, UK.
Fast Career Trajectory	Mr. Suresh Katta	Samma Technologies, California, United States



### **STAFF EVENTS**





Fundamentals of Hardware  ${\mathcal E}$ Networking

Date: 26.10.22 - 28.10.22

We would like to extend our heartfelt thanks to the Dean, Associate Dean, HoDs, faculty members, staffs, research scholars, alumni and student community for their consistent support in publishing the newsletter

#### The Editorial Téam:



Dr. Sweta Bhattacharya 🛮 Dr. Siva Rama Krishnan S





Dr. Harshita Patel



Dr. Praveen Kumar

"Reading is to the mind what exercise is to the body" -Foseph Addison Thank You!!!

