FACULTY PROFILE		
Staff Name	:	Dr. D. Lakshmi
Faculty ID	:	TEC56 / 3123348
VIDWAN ID		433815
Image		
Publon ID		https://www.webofscience.com/wos/author/record/AAH-3423-2020
Scopus ID		https://www.scopus.com/authid/detail.uri?authorId=55597087435
ORCiD ID		*https://orcid.org/0000-0001-6577-3707*
Google Scholar ID		*https://scholar.google.co.in/citations?user=nKThltkAAAAJ&hl=en*
LinkedIn ID		https://www.linkedin.com/in/devan-lakshmi-2b9978b8/
Anna University Supervisor Recognition No.		2840018
Designation	:	Associate Professor
Qualification	:	B.E., M.E., Ph.D.
Teaching Experience	:	27 years 6 months
Area of Specialization	:	Medical Image Processing, Computational Intelligence
Subjects Handled	:	Digital Image Processing Electronic Devices Analog and Digital Circuits Digital Signal Processing Microprocessors and Microcontrollers VLSI Design
Books Published	:	-
Journals Published	:	**Journals** :

		1. R Janaki, D Lakshmi, "Hybrid model-based early diagnosis of esophageal disorders using convolutional neural network and refined logistic regression", EURASIP Journal on Image and Video Processing, 2024, Article number: 19 . 2. D Lakshmi, R Janaki, V Subashini, K Senthil Kumar, CA Catherine Aurelia, ST Ananya, "Prediction of Age, Gender, and Ethnicity Using Haar Cascade Algorithm in Convolutional Neural Networks", International Conference on Worldwide Computing and Its Applications, 205-219, Springer Nature Singapore. 3. Thendral Natarajan, Lakshmi Devan, Ramaprabha Palayanoor Seethapathy, Senthil Kumar Balakrishnan, "A customized ConvNeXt-XL network with fusion of deep and handcrafted features for colposcopy image classification", International Journal of Imaging Systems and Technology,Volume:34, Issue:2,pages:e23036, 2024/3 **4.** S. Immaculate Joy, K. Senthil Kumar, M. Palanivelan, and D. Lakshmi, "Review on Advent of Artificial Intelligence in Electrocardiogram for the Detection of Extra-Cardiac and Cardiovascular Disease", IEEE Canadian Journal of Electrical and Computer Engineering, Vol:46, Issue:2, SPRING 2023 5. T Natarajan, L Devan, "Transfer learning supported accurate assessment of multiclass cervix type images, Part H: Journal of Engineering in Medicine", Volume No.237, Issue :2, 2023 6. D Lakshmi, J Sivakumar, K Palani Thanaraj, N Thendral, "Customized convolution neural network for multi-class lung abnormality classification from CT images", Information technology in industry, Volume:9, Issue:1, Pages:49-57 7. D. Lakshmi, J. Sivakumar, S. Ramani," Multi-Class SVM Prediction Model for Lung Cancer Diagnosis", International Conference on Artificial Intelligence for Smart Community, AISC 2020, 17–18 December, Universiti Teknologi Petronas, Malaysia. Lecture Notes in Electrical Engineering (LNEE, volume 758) 8. D. Lakshmi K. Palani Thanaraj M. Arunmozhi, "Convolutional neural network in the detection of lung carcinoma using transfer learning approach", Int J Imaging Syst Technol. 2019;1–10.DOI: 10.1002/ima.22394,IF :1.254/ H-Index - 43 9. Thendral. N, Lakshmi. D,"Performance Comparison of SVM Classifier Based on Kernel Functions in Colposcopic Image Segmentation for Cervical Cancer", ISMAC-CVB 2018, Springer Book Series- Lecture Notes in Computational Vision and Biomechanics, pp: 1835-1844. 10. Lakshmi. D, Niruban. R," Mathematical model for Characterization of Lung Tissues using Multiple Regression Analysis", Book Title - Soft Computing in Data Analytics, Springer Book Series - Advances in Intelligent Systems and Computing, AISC, Vol.758, pp:117-123 11. Lakshmi, D., Roy Santosham and H. Ranganathan,, "Automated Texture Based Characterization of Fibrosis and Carcinoma Using Low-Dose Lung CT Images", International Journal of Imaging Systems and Technology, Vol - 24, Issue -1 -Mar 2014, Pages: 39-

44, Online ISSN: 1098-1098. DOI: 10.1002/ima.22077. – ANNEXURE- I, Impact Factor: 0.768.

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13. D. Lakshmi, Roy Santosham, H. Ranganathan, "ANFIS in the Characterization of Fibrosis and Carcinoma using Lung CT Images", Indian Journal of Computer Science and Engineering, Vol.4,Issue-4, Aug-Sep 2013, E - ISSN: 0976-5166, P-ISSN: 2231-3850,pp-317-323
14. D. Lakshmi, Roy Santosham, H. Ranganathan, "Neural Network in the Characterization of Fibrosis and Scar Carcinoma using Lung CT Images", IJERIA,Vol. 7,No II, May 2014.

Conferences:

1. Thanigaivelu P S, D. Lakshmi,,Jayabharathi Ramasamy, D.Lakshmi, Mageshkumar N V, J. Nithisha,N. Sivakamy, Prakash S," IoT and Cloud Solutions Waste-to-Energy in Hospitals for Energy Recovery from Medical Waste", 10th International Conference on Communication and Signal Processing (ICCSP), IEEE Xplore, June 2024.
2. D.Lakshmi, Mageshkumar N V, J. Nithisha,N. Sivakamy, Prakash S, "Decision Trees for Secure and Transparent Equipment Failure Prediction in Cloud-Connected Manufacturing", 10th International Conference on Communication and Signal Processing (ICCSP), IEEE Xplore, June 2024.
3. B Maruthukannan, RC Karpagalakshmi, D Lakshmi, M Rajapriya, DC Joy Winnie Wise, C Srinivasan, "IoT-Connected Telehealth Environments with Long Short-Term Memory Networks for Precise Time-Series Patient Behavior Analysis", 2024 International Conference on Intelligent Systems for Cybersecurity (ISCS), IEEE Xplore, 2024.
4. R Umamaheswari, D Lakshmi, VS Pandi, B Geetha, S Sumithra, PY Ragini, "An Advanced Deep Learning Approach for Primary Osteoporosis Prediction Using Radiographs with Clinical Covariates", 7th International Conference on Electronics, Communication and Aerospace Technology, ICECA 2023 - Proceedings, 2023, pp. 788–793
5. P. Nagarajan, R. Ramadevi, D.Lakshmi,T. Kowsalya, J. Jensie Anitha," Foetal ultrasonographic Sparse representation evaluation of spectral trust maps", AIP Proceedings, Jan 2023, Volume:2523
6. R. Janaki, D. Lakshmi," A Novel Implementation of Esophagus Diagnosis Using Deep Learning", 2nd International Conference on Advance Computing and Innovative Technologies in Engineering Conference Date: 28th and 29th April 2022, IEEE Conference Record No.: 53722
7. Lakshmi, D., Roy Santosham and H. Ranganathan, "Comparison of Texture Analysis in the Differentiation of Carcinoma from Other Lung Abnormalities using Low Dose CT Images", IEEE EMBS-Special Topic Conference on Point-Of- Care Technologies(IEEE-

EMBS POCHT 2013), Bangalore,India, 16-18th January 2013, pp.271- 274. DOI:10.1109/PHT.2013.6461337

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9. D. Lakshmi, Roy Santosham, H. Ranganathan, " Non-Invasive Method of Characterization of Fibrosis and Carcinoma using Low-Dose Lung CT Images", IEEE – International Conference on Systems, Man and Cybernetics 2013 (IEEE SMC 2013), Manchester, U.K., 13-16th October 2013.pages-2168-2172. DOI:10.1109/SMC.2013.371
10. D. Lakshmi, H. Ranganathan, "Gray-Level Co-occurrence Matrix based Isolated Nodule Classification for the Diagnosis of Lung Cancer", Joint International Conference on Swarm Evolutionary and Memetic Computing (SEMCCO 2011) and Fuzzy and Neural Computing Conference (FANCCO 2011), Andhra University, Visakhapatnam, India,19-21st December 2011,pages 24-28.
11. D.Lakshmi, H. Ranganathan, "Morphological Processing in Segmentation of Lung from CT scan images for Diagnosis of Lung Cancer", National Conference on Emerging Trends in Communication Systems (NCETCS 2008), DMI College of Engineering, Anna University, Tamil Nadu, India, 19th September 2008, pages 116-119.
12. D.Lakshmi, Roy Santosham, H. Ranganathan, "Application of ANOVA in Lung Tissue Characterization using CT images", National Conference on Advances in Computing and Technology (NCACT 2014), VIT UniversityChennai Campus, India, to be held on 21st February 2014.pages:32-37.
13. Srinivasan K S, Lakshmi D, Ranganathan H, Gunasekaran N, "Non-Invasive Estimation of Hemoglobin in Blood using Color Analysis", First international Conference on Industrial and Information Systems, August 2006, DOI: 10.1109/ICIIS.2006.365788

Conference /Workshop Attended	:	1. Six Days FDP on Future Directions in Image Processing, SRM Institute of Science and Technology, Vadapalani Campus, 30.10.2023 to 4.11.2023. 2. IPR Awareness Program under NIPAM Scheme, Feb 2024 3. Artificial Intelligence for Engineering Applications 4. FDP on Arduino using Kotlin by IIT Bombay (Spoken Tutorial Project) 5. FDP on Android App using Kotlin by IIT Bombay (Spoken Tutorial Project) 6. International Webinar on "Robotics in Healthcare" By NITTR, Chennai 7. FDP on Embedded System Design using Intel SoC FPGAs at SSN College of Engineering 8. FDP on Intel SoC FPGAs and Intel HLS Compiler at Loyola ICAM College of Engineering and Technology 9. Two Day Workshop on "Analog and Digital System Design Using Cadence Tool" at Sri Eshwar College of Engineering, Coimbatore 10. AICTE Sponsored STTP on "Supervised and Unsupervised Machine Learning using Google Cloud", at RMK College of Engineering and Technology, 2- 7 November 2020 11. FDP on "Pattern Recognition using Neural Networks for Image Processing" at VIT University,19-23rd October 2020 12. Webinar on "Effective Presentations using Outlines in Powerpoint" on 1st September 2020 13. Capacity Building Webinar on Tools and Resources for Virtual Lab practice, 06-08- 2020 to 08-08-2020 14. Webinar on Essentials for setting up an AI/DL Lab, 17-07-2020 15. Recent Trends in Biomedical Application, 13.7.2020 to 17.07.2020 16. Get Ready for AI with MATLAB and SIMULINK, 18/06/2020 - 20/06/2020 17. Three day Online Faculty Development Program on Technologies for Healthcare, 08/06/2020 - 10/06/2020 18. Data Analysis and Visualization of COVID 19 Dataset Using Python, 7.05.2020 19. Attended a Workshop on Arduino, a course in IOT series Under 'Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching' (PMMMNMTT), Funded by the Ministry of Human Resource Development, Government of India on 8th ,Febraury 2020, by IIT Bombay 20. Attended a Faculty Development Program on "Deep Learning" at SRM Institute of Science and Technology held from 27th to 29th May 2019 21. Attended a Faculty Development Program on "VLSI and Embedded Systems for IOT Applications" at SRM Institute of Science and Technology held from30th October to 3rd November 2018. 22. Attended a 3 days In plant training on IIOT and Automation organized by MSME Technology Development Centre in association with CDCE Equinox Automation held from 7th Dec to 9th Dec 2017.

Patent Details : Total Number of Patents (IPR) Published : **02**

S.No	PatentTitle	Name of Applicants/Inventors	Status
1	IoT BASED EUTROPHICATION MONITORING SYSTEM	Dr. D. Lakshmi Mrs. R. Janaki Mrs. R. Umamaheswari	Published
2	DEEP MULTIPLE INSTANCE LEARNING FOR AUTOMATIC DETECTION OF DIABETIC RETINOPATHY	1)Dr. Elangovan G 2) Dr.T.Kalai Selvi 3) Mrs. G Valarmathi 4)Mrs. N Thendral 5) Dr. D. Lakshmi	Published

Funded Project Details

Name of the Funding Event	Funding Agency	Amount Received (in Rs.)
SERB Sponsored Seminar On "Recent Trends In Biomedical Engineering For Medical Diagnostic Applications"	DST-SERB	1,00,000/-
ATAL Advanced FDP on "Unlocking the Potential of AI: Journey from Transformer Models to GenAI, Applications from Industry to Space, and the Evolving Threat Landscape	AICTE-ATAL	6,00,000/-

Consultancy

Title	Faculty Involved	Name of the Company	Duration	Amount
IOT based Facility Management System for Gated Community	Dr. B. Victoria Jancee Dr. I. Johnsi Stella Dr. P. Latha Dr. D. Lakshmi	Averzs Technologies	6 months	Rs. 50,000

Reviewer

Name of the Journal	Publisher
Cluster Computing	Springer Nature
Signal, Image and Video Processing	Springer Nature
Journal of Supercomputing	Springer Nature