



DR.M.NAGOOR MEERAL

ASSISTANT PROFESSOR

Passionate Educator | Scholarly Researcher | Academic Mentor

Dedicated IT professional in teaching and assessment creation. Demonstrated ability to deliver engaging IT lessons through student-centered learning, active participation, and inclusive education practices. Skilled in creating supportive classroom environments where every student feels valued, supported, and motivated to succeed. Proficient in leveraging technology platforms such as Microsoft Office to enhance learning outcomes,

CONTACT

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147,GS Pallivasal Street,
Tirunelveli-6
TamilNadu, India

SPECIALIZATION

- Deep Learning
- Digital Image Processing
- Data Mining
- Machine Learning

EDUCATION

2019-2024

MANONMANIUM SUNDARANAR
UNIVERSITY

- Doctor of Philosophy (Ph.D)

2018-2019

SADAKATHULLAH APPA COLLEGE

- Master of Philosophy (M.Phil)
- CGPA: 9.5

2009-2011

SADAKATHULLAH APPA COLLEGE

- Master of Science (M.Sc)
- CGPA: 8.8

2006-2009

ANNAI HAJIRA WOMEN'S COLLEGE

- Bachelor of Science (B.Sc)
- CGPA: 8.7

ACHIEVEMENTS

- University IV Rank Holder
- Elite + silver medal and topper 5% in Big Data Computing conducted by NPTEL.

CITATIONS

- Google Scholar : 53

<https://scholar.google.com/citations?user=Mn8n3uMAAAJ&hl=en>

- Scopus : 27

<https://www.scopus.com/authid/detail.uri?authorId=57481255400>

PROFESSIONAL EXPERIENCE

- Freelancer JAN '23-JUNE '23
- Rose Mary College of Arts & Science(Women) JULY '23 - PRESENT

COMMITTEE EXPERIENCE

- Student Councelling Cell 2023 - 2024
- Department Association 2023 -2024
- InterCollegiate Culturals 2023 - 2024
- College Magazine 2023 - 2024
- Institution Innovation Council 2024 - PRESENT

COURSES HANDLED

- Software Engineering
- PHP
- Object Oriented Programming
- Digital Design
- Internet of Things
- C Programming
- Microsoft Office Automation
- HTML

TECHNICAL SKILLS

- C/C++,JAVA,PYTHON,MATLAB
- PHP,HTML
- Networking
- Big Data
- MYSQL,ORACLE
- Data Structures
- Operating System
- IoT

SOFT SKILLS

- Teaching
- Curriculum Development
- Mentorship and Councelling
- Assessment Creation
- Team Colloboration
- Classroom Management

LANGUAGES

- English(Fluent)
- Tamil(Fluent)

PROJECT EXPERIENCE:04

STUDENT PROJECT EXPERIENCE:01

CERTIFICATION COURSES:07

PROJECTS

Ph.D. (Funded by TANSICHE)

- Project Title: Automated Detection of Macular Diseases in SD-OCT images using Deep Learning
- Description: Utilized deep learning techniques for automated detection of macular diseases in SD-OCT (Spectral Domain Optical Coherence Tomography) images.
- Funding: Supported by TANSICHE (Tamil Nadu State Council for Higher Education)

M.Phil.

- Project Title: Glaucoma Diagnosis in SD-OCT images using Cup to Disc Ratio
- Description: Investigated the use of Cup to Disc Ratio (CDR) for diagnosing glaucoma in SD-OCT images, aiming to improve early detection and management of the disease.

M.Sc.

- Project Title: M-Learning using ASP.Net
- Description: Developed a mobile learning (M-Learning) platform using ASP.Net, enabling users to access educational resources and materials on mobile devices.

B.Sc.

- Project Title: Railway Cargo Loading System using ASP.Net
- Description: Designed and implemented a web-based system using ASP.Net for managing railway cargo loading operations, streamlining processes and improving efficiency.

STUDENTS PROJECTS SUPERVISION

- Blockchain Tender/Contract Management System using Python

CERTIFICATIONS

- Introduction to Machine Learning by NPTEL.
- Big Data Computing by NPTEL.
- Python for data science by NPTEL.
- AI for India 2.0 by GUVI.
- Deep Learning using Python with Keras- Tensorflow by Scientific Computing Solutions.
- LaTeX training by Spoken Tutorial Project, IIT Bombay.
- Ten Days Online Training Programme On MATLAB by Digital Career and Entrepreneurship Hub , MHRD BU RUSA Phase II BEICH.

MEMBERSHIP:01

MEMBERSHIP IN ACADEMIC BODIES

- Life Member in News Rains Journal

RESEARCH PUBLICATIONS

Publication of chapters in edited volumes/books

- Nisha, S. S., Sathik, M. M., & Meeral, M. N. (2021). Application, algorithm, tools directly related to deep learning. In Handbook of Deep Learning in Biomedical Engineering (pp. 61-84). Academic Press.
- Nisha, S. S., & Meeral, M. N. (2021). Applications of deep learning in biomedical engineering. In Handbook of deep learning in biomedical engineering (pp. 245-270). Academic Press.

Journal Publications (UGC/Scopus/SCI/Web of Science)

- Meeral, M. N., Nisha, S. S., & Sathik, M. M. (2021). A Multiscale Convolutional Neural Network for Speckle Noise Removal in Optical Coherence Tomography Images. Turkish Online Journal of Qualitative Inquiry, 12(10).[Scopus]
- Meeral, M. N., Nisha, S. S., & Sathik, M. M. (2021). Attention Mechanism In Segmentation And Classification Of Optical Coherence Tomography Images. Webology (ISSN: 1735-188X), 18(6).[Scopus]
- Nisha, S. S., Meeral, M. N., & Sathik, M. M.(2022). JIEB-linknet: an Improved Linknet with Joint Input Encoder Block for Segmentation of Retinal Layers and Fluid Accumulation in OCT Images. International Journal of Health Sciences, (I), 2072-2096.[Scopus]
- Meeral, M. N., Nisha, S. S., (2022). Denoising Speckle Noise in Optical Coherence Tomography Images: A Comparative Analysis. Volume 9 (2022), Issue 7, 6786-6796.
- Meeral, M. N., Nisha, S. S., & Sathik, M. M. (2019). A Comprehensive Analysis of Edge Detectors in SD-OCT Images for Glaucoma Diagnosis. International Research Journal of Engineering and Technology (IRJET), 6(03), 01-06.
- Zuberiya, J. A., Meeral, M. N., & Nisha, S. S. (2019).A Comprehensive Analysis of Edge Detectors in Fundus Images for Diabetic Retinopathy Diagnosis. SSRG International Journal of Computer Science and Engineering.
- Sathik, M. M. , Meeral, M. N, & Nisha, S. S (2019, March). Segmentation of SD-OCT Images: A Comparative Study. SSRG International Journal of Computer Science And Engineering, Special Issue. ISSN 2348-8387.
- Meeral, M. N, Nisha, S. S, & Sathik, M. M. (2022). Deep Learning In Macular Disease Diagnosis: A Technical Review. International Journal of Innovative Research in Computer & Communication Engineering, 10(2), ISSN 2320-9801.
- Meeral, M. N, Nisha, S. S, Sathik, M. M (2020, January). An Overview of Imaging Modalities in Ophthalmology. Sadakath: A research Bulletin, 7(2), ISSN 2347-7644.

PUBLICATIONS

CHAPTERS:02

JOURNALS:09

RESEARCH

EXPERIENCE:05 YEARS

PAPERS PRESENTED:07

PAPER PRESENTATIONS

- Presented "Cyber Crime and Security" at ICAPO, St. Xavier's Arts and Science College, Palayamkottai, on January 22, 2010.
- Presented "A Comprehensive Analysis of Edge Detectors in Fundus Images for Diabetic Retinopathy Diagnosis" and "Segmentation of SD-OCT Images: A Comparative Study" at the International Conference on Trends in Engineering Technology and Management (ICRTETM19), PSN College of Engineering and Technology, on March 18, 2019.
- Presented "Glaucoma Diagnosis in SD-OCT Images Using Cup to Disk Ratio" at the International Conference on Soft Computing & Optimizing Techniques (ICSO'19), Kamaraj College, Tuticorin, on August 9-10, 2019.
- Presented "Utility of Deep Learning Framework In Macular Screening- A Technical Perspective" at the International Conference on Recent Trends in Stochastic Modeling and Its Applications (ICRTSMA-2020), Manonmaniam Sundaranar University, Tirunelveli, from January 9-11, 2020.
- Presented "An Empirical Analysis of Denoising algorithms for Speckle Noise Removal in SD-OCT Images" at A Two-day International Conference on Recent Trends in Computing and Information Technology (RTCIT-2022), Sarah Tucker College, Tirunelveli, from February 11-12, 2022.
- Presented "Applications of Artificial Intelligence in Library Services" at the International Conference on Cyber and Information Security-2023, Dwarka Doss GoverdhanDoss Vaishnav College, on October 5-6, 2023.
- Presented "Internet of Things-IOT in Library Sciences" at the conference on Recent Advances in Science, Technology, Engineering, Management, and Social Sciences (2023), Karpaga Vinayaga College of Engineering and Technology, Chengalpattu, from October 6-8, 2023.

SEMINAR/ WORKSHOPS ATTENDED:08

SEMINAR/WORKSHOPS PARTICIPATION

- "Research Trends in Machine Learning" at Lady Doak College, Madurai on September 28, 2018.
- "Enhancing Professional Skills & Traits" at Sadakathullah Appa College, Tirunelveli on July 20-21, 2018.
- "State Level Workshop on Python with Data Science" at Sadakathullah Appa College, Tirunelveli on October 3-4, 2018.
- "Workshop on Big Data Analytics" at Sadakathullah Appa College, Tirunelveli on August 13, 2018.
- "Advanced Trends in Computer Science" at Sadakathullah Appa College, Tirunelveli on March 22, 2019.
- "Machine Learning and Deep Learning Using Tensorflow" at Sadakathullah Appa College, Tirunelveli on February 21, 2019.
- "Three days hands-on training on MATLAB and LabVIEW for Engineering Applications" at National Engineering College, Kovilpatti on February 11-13, 2019.

- "Regional Meet Institutions' Innovation Council" at Francis Xavier Engineering College, Tirunelveli on January 24, 2024.

WEBINARS/ONLINE FDP PARTICIPATION

- Webinar on "IOT AND IT'S APPLICATION" at SLS.MAVMM. Ayira Vaisyar College, Madurai on May 27, 2020.
- Two Day National Webinar on "Exploration Approach in Data Science" at Idhaya College For Women, Kumbakonam on May 27-28, 2020.
- Webinar on "Deep Learning Implementation" at Sadakathullah Appa College, Tirunelveli on May 23, 2020.
- 1-week FDP in "Open source Tool for research" at Teaching Learning Centre, Ramanujam College, University of Delhi from June 8-14, 2020.
- International Webinar on "Recent Research Trends in Deep Learning through Google Colab (Python)" at Government College For Women (autonomous), Kumbakonam on June 12, 2020.
- Seminar on "Towards Successful Publication of Research Work" at KLE Dr.M.S.Sheshgiri college of Engineering and Technology, Belgavi on June 17, 2020.
- Six days FDP on "Research Perspectives in Medical Image Processing" at Kalaingar karunanidhi institute of Technology, Coimbatore from June 10-15, 2020.
- Two days National Workshop on "Interview Skills" at Dr.B.R.Ambedhkar National Institute of Technology, Jalandhar on June 15-16, 2020.
- Webinar series on "Research perspectives: Transition from Industry 4.0 to 5.0" at Bharathiyar University, Coimbatore from June 15-20, 2020.
- Workshop on "Deep Learning Based Computer vision and its Applications" at SRM University, Andhra Pradesh on June 19-20, 2020.
- Seminar on "Basics of Artificial Neural Network and Introduction to Matlab Tool" at Moogambikai College of Engineering, Pudukkottai on June 21, 2020.
- Seminar on "Applications of Machine Learning in Image Processing" at Mohamed Sathak A J College of Engineering, Chennai on June 26, 2020.
- FDP on "Python Programming and Its Applications" at V.S.Lakshmi Engineering College for Women from June 29-July 4, 2020.
- FDP on "Image Processing using Matlab" at St.Xaviers Catholic College of Engineering, Nagercoil from July 6-11, 2020.
- International Webinar on "Digital Image Processing" at Government Institute of Forensic Science, Aurangabad on July 12, 2020.
- FDP on "Artificial Intelligence" at Yoganandha College of Engineering & Technology, Jammu and Kashmir from July 10-14, 2020.
- FDP Webinar Series III UGC Stride Component 1 on "Capacity Building of Young talent in Transdisciplinary research for a sustainable Development" at Holycross College, Tiruchirapalli from July 13-18, 2020.
- Webinar on "Machine Learning with Python" at Annamalai University from July 22-27, 2020.

- Workshop on "Artificial Intelligence, Machine Learning and Deep Learning" as part of ATAL program from February 22-26, 2021.
- Six days online training programme on "Matlab" at Bharathiyar University from March 10-17, 2021.
- Seminar on "Machine learning and Artificial Intelligence" at Sadakathullah Appa College, Tirunelveli on June 7, 2021.
- Seminar on "Recent trends in IoT" at Sadakathullah Appa College, Tirunelveli on June 17, 2021.
- Seminar on "A Technical Journey Towards e-commerce World" at Sadakathullah Appa College, Tirunelveli on June 24, 2021.
- Seminar on "Artificial Intelligence" at Sadakathullah Appa College, Tirunelveli on June 25, 2021.
- Seminar on "Social Responsibility & Big Data in Politics" at K.R.College of Arts and Science, KovilPatti on October 9, 2021.
- Seminar on "Advanced Javascript Concept" at K.R.College of Arts and Science, KovilPatti on October 12, 2021.
- Seminar on "Python Programming" at Dr.M.G.R. Educational and Research Institue, Chennai on November 8, 2021.
- Seminar on "Lightweight security for IOT Applications using cellular automata & AI approach and concepts" at Adithanar College of Arts and Science on December 8, 2021.
- Cyber Data Analytics at Vel Institute of Arts and Science, Thindal, Erode on December 9-20, 2021.

EVENTS ORGANIZED:06

WORKSHOP / SYMPOSIUM / CONFERENCE ORGANIZED

- Coordinator for a two-day department Association Competition from August 9-14, 2023, at the Department of Information Technology, Rose Mary College of Arts and Science (Women).
- Coordinator for Culturals event on August 11, 2023, at Rose Mary College of Arts and Science (Women).
- Coordinator for a Department Association Competition on September 12, 2023, at the Department of Information Technology, Rose Mary College of Arts and Science (Women).
- Coordinator for a one-day workshop on Python Programming on September 13, 2023, at the Department of Information Technology, Rose Mary College of Arts and Science (Women).
- Coordinator for the RITTS-2k24 Symposium on February 13, 2024, at the Department of Information Technology, Rose Mary College of Arts and Science (Women).
- Coordinator for a Paper Presentation Competition on March 4, 2024, at the Department of Information Technology, Rose Mary College of Arts and Science (Women).