Faculty Information:

Sl.No	Information	
1.	**Name:**	Dr Gowri Shankar M
	Contact Address:	Associate Professor of EE Engg.
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Researcher Publications Links & IDs	
Scopus	57742114300 (https://www.scopus.com/authid/detail.uri?authorId=57742114300)
Web of Science Researcher ID	ABA-5518-2021 (https://www.webofscience.com/wos/author/record/ABA-5518-2021)
ORCID	https://orcid.org/0000-0002-0293-6393
Google Scholar	https://scholar.google.co.in/citations?user=0Bvh5SlAAAAAJ&hl=en

2.	**Qualification**	**B.E., M.E, Ph.D.,**
		➢ **B.E.-**Electrical and Electronics Engineering, **2012**, Mahendra Engineering College, Namakkal (Affiliated to Anna University, Chennai), First Class **(8.94 - CGPA)**.
		➢ **M.E. –** VLSI Design - January **2014**, First Class with Distinction **(8.68 -CGPA)**, MIET Engineering College, Trichy (Affiliated to Anna University, Chennai) - **26th University Rank Holder.**
		➢ **Ph.D** – Faculty of Information and Communication Engineering, Sponsored by AICTE – QIP Research Scholar (Full Time), AICTE QIP Student Unique Id: FP2000143, Anna University Registration Number: 21144691105, QIP Centre: Bannari Amman Institute of Technology, Sathyamangalam, Erode. Affiliated to Anna University, Chennai **Feb 2021 – Jun 2023.**
		Title of the Thesis: Investigation on performance enhancement in detection of cardiac arrhythmias from electrocardiogram signals using multiple classifiers with hyperparameters tuning algorithms

3.	**Date of Joining**	27.05.2024
4.	**Position Held**	Associate Professor of EEE
5.	**Research Interest**	**Medical Image Processing, Bio Signal Processing, Soft Computing, AI, ML/DL, VLSI Design and Renewable Energy Systems**

6.	**Publications**

1. "Amelioration of Multitudinous Classifiers Performance with Hyper-Parameters Tuning in Elephant Search Optimization for Cardiac Arrhythmias Detection", The Journal of Supercomputing, 2024.

2. "Enhancing Security in MANET through EAACK: A Novel Approach for Node Detection, Acknowledgment Validation and Routing Optimization", 4th International Conference on Communication, Computing and Industry 6.0, C216 February 2024.

3. "Enhancement in 6G Intelligent Network Technologies using Cognitive Radio Network" 4th International Conference on Communication, Computing and Industry 6.0, C216 February 2024.

4. "Short-time Fourier transform based ensemble classifiers for detection of atrial fibrillation from ECG datasets", Ratio Mathematica, December 2023.

5. "Alcoholic EEG Signal Classification using Multi-Heuristic Classifiers with SGD Technique for Tuning the Hyperparameters" IETE Journal of Research, October 2023.

6. "Extreme Learning Machine (ELM) based Performance Analysis and Epilepsy Identification from EEG Signals", IETE Journal of Research, September 2023.

7. "Detection of Congestive Heart Failure with Nature-Inspired Optimization and Classifiers Performance Amelioration from ECG Signals", IETE Journal of Research, DOI: 10.1080/03772063.2022.2088627, pp1-14 August 2023.

8. "Performance Analysis of Correlation Dimension with Hybrid GMM-FF Classifier for Alcoholic EEG signal Detection" Journal of Xidian University, 2023

9. "Performance Analysis of Correlation Dimension Classifier for the Detection of Oral Cancer" Journal of Xidian University, 2023

10. "Performance Exploration of Multiple Classifiers with Grid Search Hyper Parameter Tuning for Detecting Epileptic Seizures from EEG Signals", Journal of Scientific & Industrial Research Vol. 81, July 2022, pp. 754-766

11. "Classification of cardiac diseases from ECG signals through bio inspired classifiers with Adam and R-Adam approaches for Hyper parameters updation", Measurement, Vol 194 (2022) 111048, https://doi.org/10.1016/j.measurement.2022.111048

12. "Performance Analysis of Least Square Linear Regression with Various Classifiers for Cardiovascular Respiratory Detection from Capnography", 2022 Smart Technologies,

Communication and Robotics (STCR), 2022.

13. "Logistic Regression Classifier with Hybrid Dimensionality Reduction Techniques for Epilepsy Detection from EEG Signals", 2022 Smart Technologies, Communication and Robotics (STCR), 2022.

14. "Performance Analysis of Cat Swarm Optimization with Soft Discriminant Classifier for Diagnosis of Epilepsy using EEG Signals", 2022 Smart Technologies, Communication and Robotics (STCR), 2022.

15. "Analyzing Haar and dB2 with Compensatory GMM Classifier for Epilepsy Detection", 2022 Smart Technologies, Communication and Robotics (STCR), 2022.

16. "Performance Analysis of Lion Optimization Algorithm with Hybrid Classifier for Epilepsy Detection", 2022 Smart Technologies, Communication and Robotics (STCR), 2022.

17. "Performance Analysis of Classifiers in Detection of CVD using PPG Signals", AIP Proceedings of (ICCSSS - 2022).

18. "Performance Analysis of Classifiers in Detection of Conscious State from Alcoholic EEG Signals", AIP Proceedings of (ICCSSS - 2022).

19. "Analysis and Detection of Sentient State from Alcoholic EEG Signals using the Fast Fourier Transform Features based Multiple Classifiers", AIP Proceedings of (ICCSSS - 2022).

20. "Performance Analysis of Classifiers in Detection of Diabetes from PIMA Indians Database", AIP Proceedings of (ICCSSS - 2022).

21. "Analysis and Classification of ECG Signal based on Whale Optimization with Compact Multiclass Support Vector Machine," 2021 Smart Technologies, Communication and Robotics (STCR), 2021, pp. 1-4, doi: 10.1109/STCR51658.2021.9589026

22. "Coordinated Factor Analysis and Water Wave Optimization (WWO) Classifier for Classification of Arrhythmias from ECG Signal," 2021 Smart Technologies, Communication and Robotics (STCR), 2021, pp. 1-5, doi: 10.1109/STCR51658.2021.9588955

23. "Certain Investigation on Intelligent Renewable Powered Weather Station", Journal of Computational and Theoretical Nanoscience, American Scientific Publishers, Vol 18, Issue 3, Pages 1011-1015, 2021, https://doi.org/10.1166/jctn.2021.9687

24. "Digital Image Falsification Detection Based on Dichromatic Model", Data Engineering and Communication Technology, Springer, Singapore, Pages 361-369, 2021, https://doi.org/10.1007/978-981-16-0081-4_36

25. "Performance Analysis of Dimensionality Reduction using PCA, KPCA and LLE for ECG Signals", IOP Conference Series: Materials Science and Engineering, 2021, DOI 10.1088/1757-899X/1084/1/012005

	26. "Performance Analysis for Arrhythmia Classification using PSO GWO and SVM", International Conference on Signal Processing and Communication (ICPSC), 2021, pp. 67-72, doi: 10.1109/ICSPC51351.2021.9451729
	27. "Performance Analysis of Linear Discriminant Analysis (LDA) With Optimization Techniques for Arrhythmia Classification from ECG Signals", International Journal of Aquatic Science, Vol 12, Issue 03, 2021, ISSN: 2008-8019.
	28. "A Novel to Achieve Ultra HD Video Compression by using VHT Algorithm based on Embedded Technology", International Journal of Advanced Research in ECE (IJARECE), Vol 7 issue 3 March 2018 Page no. 181 to 183
	29. "PID Control of Power Factor Corrected Zeta Converter fed SMPS", International Journal of Applied Engineering Research (IJAER), Vol 12, and Number 1 (2017) Page no. 283 to 285.
	30. "FPGA based Multi Rail Chopper by using MSP 430 Processor", International Journal of Engineering- Online (IJOER), Vol 5 issue 1 January 2017 Page no. 07 to 10
	31. "Design FPGA Based Multi Rail Dc-Dc Converter Mac Architecture by using MSP 430 Processor", International Journal of Advanced Research In ECE (IJARECE), Vol 3 issue 4 April 2014 Page no. 391 to 394
	32. "Design FPGA Based Mac Architecture by using MSP 430 Processor", International Journal of Communication and Computer Technologies (IJCCTS), Vol 2 issue 11 March 2014 Page no. 56 to 58.
7.	**International Conferences & National Conferences**
	International Conferences 1. "Design FPGA Based Mac Architecture by using MSP 430 Processor" a paper was presented an International conference on "ICEEICA -16, at Selvam College of technology, Namakkal held on March 2nd 2016. 2. "MSP 430 Processor for Control Multi-Rail Dc-Dc Converter" a paper was presented an International conference on "ICEEICA -16, at Selvam College of technology, Namakkal held on March 2nd 2016. 3. "Maximum Power Point Tracking Based on the Closed Circuit Voltage Method for Thermoelectric Generators" a paper was presented a International conference on "ICISRES-17", at Selvam College of technology, Namakkal held on March 2nd 2017. 4. "Finger Print based Intelligent ATM" a paper was presented a International conference on "ICISRES-17", at Selvam College of technology, Namakkal held on March 2nd 2017. 5. "FPGA Based Multi Rail Chopper by using MSP 430 Processor" a paper was presented at International conference on "ICISRES-17", at Selvam College of technology, Namakkal held on March 2nd 2017. 6. "PID Control of Power Factor Corrected Zeta Converter Fed SMPS" a paper was

presented at International conference on "ICISRES-17", at Selvam College of technology, Namakkal held on March 2nd 2017.

7. **"PID Control of Power Factor Corrected Zeta Converter Fed SMPS"** a paper was presented at International conference on "ICPCIT-17", at Madanapalle Institute of Technology & Science (MITS), Madanapalle, Andhra held on April 27th 2017.

8. **"Visualization Created Image Fake Finding"** a paper was presented at International conference on "ICLTEC-18", at Malla Reddy College of Engineering, Hyderabad, held on Dec 28th 2018.

9. "Digital Image Falsification Detection Based on Dichromatic Model", Data Engineering and Communication Technology, Springer, Singapore, 4th International Conference on Data Engineering, Kakatiya Institute of Technology, Warangal-506015, September 2020

10. "Performance Analysis of Dimensionality Reduction using PCA, KPCA and LLE for ECG Signals", IOP Conference Series: Materials Science and Engineering, 2021, DOI 10.1088/1757-899X/1084/1/012005

11. "Performance Analysis for Arrhythmia Classification using PSO GWO and SVM", International Conference on Signal Processing and Communication (ICPSC), 2021, pp. 67-72, doi: 10.1109/ICSPC51351.2021.9451729

12. "Performance Analysis of Linear Discriminant Analysis (LDA) With Optimization Techniques for Arrhythmia Classification from ECG Signals", Second International Conference on New Age Systems and Automation Technologies - ICNAAT-2021 held during 9-10 July2021 at BIT Sathyamangalam

13. "Analysis and Classification of ECG Signal based on Whale Optimization with Compact Multiclass Support Vector Machine," First International Conference on Smart Technologies, Communication, and Robotics 2021 (IEEE-STCR 2021), 09 – 10 October 2021, BIT Sathyamangalam

14. "Coordinated Factor Analysis and Water Wave Optimization (WWO) Classifier for Classification of Arrhythmias from ECG Signal," First International Conference on Smart Technologies, Communication, and Robotics 2021 (IEEE-STCR 2021), 09 – 10 October 2021, BIT Sathyamangalam

15. "Performance Analysis of Classifiers in Detection of CVD using PPG Signals", AIP Proceedings of Second International Conference on Circuits, Signals, Systems and Securities (ICCSSS - 2022), 25th – 26th March 2022, BIT Sathyamangalam

16. "Performance Analysis of Classifiers in Detection of Conscious State from Alcoholic EEG Signals", AIP Proceedings of Second International Conference on Circuits, Signals, Systems and Securities (ICCSSS - 2022), 25th – 26th March 2022, BIT Sathyamangalam

17. "Analysis and Detection of Sentient State from Alcoholic EEG Signals using the Fast

Fourier Transform Features based Multiple Classifiers", AIP Proceedings of Second International Conference on Circuits, Signals, Systems and Securities (ICCSSS - 2022), 25th – 26th March 2022, BIT Sathyamangalam

18. "Performance Analysis of Classifiers in Detection of Diabetes from PIMA Indians Database", AIP Proceedings of Second International Conference on Circuits, Signals, Systems and Securities (ICCSSS - 2022), 25th – 26th March 2022, BIT Sathyamangalam

19. "Performance Analysis of Least Square Linear Regression with Various Classifiers for Cardiovascular Respiratory Detection from Capnography", Second International Conference on Smart Technologies, Communication, and Robotics 2022 (IEEE-STCR 2022), 10 – 11 December 2022, BIT Sathyamangalam

20. "Logistic Regression Classifier with Hybrid Dimensionality Reduction Techniques for Epilepsy Detection from EEG Signals", Second International Conference on Smart Technologies, Communication, and Robotics 2022 (IEEE-STCR 2022), 10 – 11 December 2022, BIT Sathyamangalam

21. "Performance Analysis of Cat Swarm Optimization with Soft Discriminant Classifier for Diagnosis of Epilepsy using EEG Signals", Second International Conference on Smart Technologies, Communication, and Robotics 2022 (IEEE-STCR 2022), 10 – 11 December 2022, BIT Sathyamangalam

22. "Analyzing Haar and dB2 with Compensatory GMM Classifier for Epilepsy Detection", Second International Conference on Smart Technologies, Communication, and Robotics 2022 (IEEE-STCR 2022), 10 – 11 December 2022, BIT Sathyamangalam

23. "Performance Analysis of Lion Optimization Algorithm with Hybrid Classifier for Epilepsy Detection", Second International Conference on Smart Technologies, Communication, and Robotics 2022 (IEEE-STCR 2022), 10 – 11 December 2022, BIT Sathyamangalam

24. Performance Analysis of Correlation Dimension with Hybrid GMM-FF Classifier for Alcoholic EEG signal Detection" Third International Conference on Circuits, Signals, Systems and Securities (ICCSSS - 2023), 13th – 14th May 2023, BIT Sathyamangalam

25. "Performance Analysis of Correlation Dimension Classifier for the Detection of Oral Cancer" Third International Conference on Circuits, Signals, Systems and Securities (ICCSSS - 2023), 13th – 14th May 2023, BIT Sathyamangalam.

26. "Enhancing Security in MANET through EAACK: A Novel Approach for Node Detection, Acknowledgment Validation and Routing Optimization", 4th International Conference on Communication, Computing and Industry 6.0, C216 December 2023.

27. "Enhancement in 6G Intelligent Network Technologies using Cognitive Radio Network" 4th International Conference on Communication, Computing and Industry 6.0, C216

December 2023.

National Conferences

1. "MPPT Based on Thermal Electric Power Generator" a paper was presented a National conference on "CEIET-17", at Cheran College of Engineering, Karur held on March 17th 2017.

2. "Design FPGA Based Mac Architecture By using MSP 430 Processor" a paper was presented a National conference on "NCRTCCEE''16, at Annai Mathammal Sheela Engineering College, Namakkal held on March 18th 2016.

3. "Design FPGA Based Dc-Dc Converter by using MSP 430 Processor" a paper was presented a National conference on "ETIET 2014, at Easa College of Engineering and technology, Coimbatore held on February 7th 2014.

4. "Design FPGA Based Mac Architecture by Using MSP 430 Processor" a paper was presented a National conference on "NCKSRCE''14, at KSR College of Engineering, Tiruchengode held on March 15th 2014.

8.	**Honors and Awards**	- Won the **Best Faculty Award** for the academic year 2016-2017 - Secured University Rank **26th Place** in Master of engineering. - Won the M.E (Design of FPGA based DC-DC Converter by using MSP430 Processor) **best project award** for the batch 2013-2014
9.	**Achievements**	**"Basic Electrical and Electronics Engineering"** a book was published **CHARULATHA PUBLICATION,** Academic year 2015-2016 **"Signals and Systems"** a book was published **CHARULATHA PUBLICATION,** Academic year 2018-2019 ISBN: 978-93-86532-80-0. - Delivered the **Guest Lecture on "Design of Electrical Machines- EE6604"**, SRG Engineering College 21st April 2018. - Delivered the **Seminar on "Investigation on Performance Analysis of Electrocardiogram Signals using Various Classification Machine Learning Algorithms"**, Bannari Amman Institute of Technology, 30th July 2021. - Delivered the **Seminar on "Analysis and Classification of ECG Signal based on Different Dimensionality Reduction Techniques with Multiple classifiers"**, Bannari Amman Institute of Technology, 10th November 2022. - Delivered the **Guest Lecture on "ECG Signals through Bio-Inspired Classifiers with Hyperparameter Tuning"**, Sri Krishna College of Technology 02nd November 2023 and 03rd November 2023.

10.	**Memberships**	➢ *Life member*: IAENG
11.	**Patents**	1. **"An Automated Adaptive Self Power Generate Garbage Notification System"**, OFFICIAL JOURNAL OF THE PATENT OFFICE, 22nd Feb 2019 Application no. 201911004222 A.
		2. **"A Portable Device for Leadless Heart Rate Monitoring and Detection of Different Arrhythmias through a Computational Intelligence Techniques"**, OFFICIAL JOURNAL OF THE PATENT OFFICE, 05th September 2023 Application no. 202341059556 A.
		3. **"An Innovative Wearable Device Interface for Heart Rate Monitoring using Artificial Intelligence Techniques"**, OFFICIAL JOURNAL OF THE PATENT OFFICE, 21st September 2023 Application no. 202342063394 A.
		4. **"A dexterous Static RAM for handheld applications"**, OFFICIAL JOURNAL OF THE PATENT OFFICE, 07th October 2023 Application no. 202341067350 A.
		5. **"Health Flush: The Urinalysis Toilet"**, OFFICIAL JOURNAL OF THE PATENT OFFICE, 25th November 2023 Application no. 202341080125 A.
		6. **"Development of PCR Device using STM32MP135F-DK AND OPENGL"**, OFFICIAL JOURNAL OF THE PATENT OFFICE, 04th December 2023 Application no. 202341082361 A.
		7. **"Development of Wireless Charging Station Using STM32MP135F-DK and OpenGL"** OFFICIAL JOURNAL OF THE PATENT OFFICE, 18th December 2023 Application no. 202341086267 A.
		8. **"Development of OEE (overall equipment effectiveness) monitoring system using embedded technology"** OFFICIAL JOURNAL OF THE PATENT OFFICE, 16th May 2024 Application no. 202441038126.

12.	**Other Activities**	➤ Coordinator: Symposium, Workshop, International Conferences ➤ Organized National Level Technical Symposium for students ➤ Organized National Level Workshop for Students ➤ Organized National Level Project Expo for Students ➤ Organized IEEE, AIP Conferences, EPICS 2024, RESET 2024
13.	**Photo**	

Peer Review Details		
Verified Peer Reviews	**Number of Peer Reviews**	**Quartiles**
IEEE Access	22	Q2
ETRI Journal	06	Q3
IET Signal Processing	04	Q3
IETE Journal of Research	02	Q3
IEEE Journal of Biomedical and Health Informatics	40	Q1
Scientific Report	02	Q1
BMC Medical Informatics and Decision Making	01	Q1
Computer Methods in Biomechanics and Biomedical Engineering	03	Q4