Dr. J. Siva Ramakrishna, Ph.D.

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https://scholar.google.com/citations?user=P7l0TlkAAAAJ&hl=en
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Brief Introduction

I have completed my Ph.D. program from the M. S. Ramaiah University of Applied Sciences, Bangalore, India. My research work includes developing machine learning algorithms for functional MRI data analysis for cognitive state classification and functional connectivity analysis. I have explored various feature engineering and machine learning architectures to solve cognitive state classification problems. My research interest is in signal processing, pattern recognition and deep learning for different applications. I have completed AICTE QIP-PG certification in AIML from IIIT Nagpur.

Education

S. No	Degree	Specialization	University	Year of Passing	Percentage
1	Ph. D	Biomedical signal and Image Processing	M. S. Ramaiah University of Applied Sciences, Bangalore	December, 2023	-
2	M. E	Embedded Systems and Technology	Anna University, Chennai	May, 2008	73
3	B. E	E. C. E	Anna University, Chennai	May, 2005	74

Certifications

AICTE QIP-PG certification (AIML) from IIIT Nagpur (Jan 2025)

NPTEL Certifications

2024
- Programming in JAVA by IIT Kharagpur
- Computer Vision and Image Processing by IIT Guwahati
- Cloud Computing and Distributed Systems by IIT Kanpur

2023
- Google cloud computing foundations by IIT Kharagpur
- Software testing by IIITB Bangalore
- Introduction to internet of things by IIT Kharagpur
- Affective computing by IIIT Delhi

2022
- Cloud computing by IIT Kharagpur
- Data Mining by IIT Kharagpur
- Data science for engineers IIT Madras

Ph.D. Work

Ph.D. Thesis Title: Development of Learning Algorithms for Functional MRI Data Analysis

- Developed machine learning algorithms for functional MRI data analysis for cognitive state

classification and functional connectivity analysis.

- Cognitive state classification:

Clustering-classifier hybrid framework, Split time series framework, and tensor gradient-based discriminative region algorithms have been developed for cognitive state classification.

- Functional connectivity analysis

The graph-based brain network analysis and dynamic Bayesian framework algorithms have been developed for functional connectivity analysis. Granger causality and transfer entropy framework have been performed to study causal connectivity and classification of healthy and unhealthy brains.

Skills

I can:

- Work with DICOM format for medical image restoration
- Implement Signal and image processing techniques in Python and MATLAB.
- Develop supervised and unsupervised machine learning algorithms for data analysis.
- Perform tensor decomposition, dynamic Bayesian networks, and graph analysis for functional MRI data analysis.

Boot Camps Conducted (as resource person)

- Essentials of problem solving: Four weeks on Graph theory.
- Programming for problem solving: Four weeks on Python programming

Experience

Teaching: 12.7 years

S. No	Organization	Role	Period	Subjects taught	Experience
1	Institute of Aeronautical Engineering, Hyderabad	Assistant Professor (AIML)	December 2023 to date	Python programming, Graph theory, Object oriented programming	1.3 years
2	Institute of Aeronautical Engineering, Hyderabad	Assistant Professor	August 2021 to date	ICA, CS, and ESD	2.4 years
3	Institute of Aeronautical Engineering, Hyderabad	Assistant Professor	May 2017 to April 2019	EDC, ECA, AC, DC and AWP	2 years
4	Sree Venkateswara College of Engineering, Nellore	Associate Professor	July 2012 to June 2015	SS, EDC, ECA, LICA, and DSD	3 years
5	Narayanadri Institute of Science and Technology, Rajampet	Assistant Professor	June 2011 to May 2012	DSP, and EDC	1 year
6	Priyadarshini College of Engineering and Technology, Nellore	Assistant Professor	June 2008 to May 2011	EDC, ECA, LICA, DSP, ERTOS	3 years

Research: 3.3 years

S. No	Organization	Role	Period	Activity	Experience
1	IIITB, Bangalore	Research Assistant	May 2019 to August 2020	Developed EEG-based Emotion recognition model	1.3 years
2	M. S. Ramaiah University of Applied Sciences, Bangalore	Research scholar	July 2015 to April 2017	Developed Learning Algorithms for Cognitive state classification.	2 years

Academic Identity

Indian Research Information Network System (IRINS)
https://iare.irins.org/profile/231174
Google Scholar Citation:
https://scholar.google.com/citations?user=P7l0TlkAAAAJ&hl=en
Scopus:
https://www.scopus.com/authid/detail.uri?authorId=57192685357

Research Publications

Journals

1. Jeevakala Siva Ramakrishna et al., "Development of explainable machine intelligence models for heart sound abnormality detection", Indonesian Journal of Electrical Engineering and Computer Science (2024). Vol. 36, No. 2 Year 2024, Pages 846-853. (Scopus)
2. Jeevakala Siva Ramakrishna, and Hariharan, "Classification of cognitive states using clustering split time series framework", Computer Assisted Methods in Engineering and Science. 2024. 31(2): 241–260. (Scopus)
3. J. Siva Ramakrishna and Hariharan Ramasangu, Identification of significant instants of voxels for cognitive state classification using interpretable machine learning models, Journal of medicinal and chemical sciences, 6(6), 2023 pp. 1291-1301. (Scopus)
4. J. Siva Ramakrishna and Hariharan Ramasangu, Classification of cognitive state using task-specific connectivity features, Engineering, Technology and Applied Science research, 13(3), 2023, 10675-10679. (Scopus & ESCI)
5. Venkateswarlu. S. C., Siva Ramakrishna. J., Kumar N. U., Munaswamy P., Emotion recognition from speech and text using long short-term memory", Eng. Technol. Appl. Sci. Res., 13(4), 2023, pp. 11166–11169. (Scopus & ESCI)

Conference

1. Umar Mohmed, and Siva Ramakrishna Jeevakala. Network Intrusion Detection System for Learning Algorithms. SmartCom 2025. 2025. Springer, Singapore. (Scopus)
2. J Siva Ramakrishna, and Hariharan Ramasangu, (2021). Causal Connectivity based Classification of Functional MRI data. In 2021 IEEE 18th India Council International Conference (INDICON) (pp. 1-6). IEEE (Scopus).
3. J. Siva Ramakrishna, Neelam Sinha, and Hariharan Ramasangu, (2021). Classification of human emotions using EEG-based causal connectivity patterns, Proceedings of the Conference on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB), 2021, pp. 1-8. (Scopus)
4. J. Siva Ramakrishna and Hariharan Ramasangu, (2019). Analysis and classification of discriminative region in cognitive functional MRI data. In: Computational intelligence: theories and applications and future directions Volume II, 799, Springer. (Scopus)

5. J. Siva Ramakrishna, and Hariharan Ramasangu, (2019). Estimation of functional connectivity in cognitive impaired brain using non-Homogeneous dynamic Bayesian model, Proceedings of the IEEE Region 10 Conference (TENCON), pp. 2154- 2159. (Scopus)

6. J. Siva Ramakrishna, and Hariharan Ramasangu, (2018). Functional connectivity analysis of default mode network for healthy and unhealthy brains, Proceedings of the IEEE Symposium Series on Computational Intelligence (SSCI), pp. 828-835. (Scopus)

7. J. Siva Ramakrishna, and Hariharan Ramasangu, (2018). Functional MRI data analysis using connectivity strengths to identify cognitive states, Proceedings of the International Conference on Advances in Computing, Communications, and Informatics (ICACCI), pp. 578-582. (Scopus)

8. J. Siva Ramakrishna, and Hariharan Ramasangu, (2017). Tensor gradient based discriminative region analysis for cognitive state classification, Proceedings of the IEEE Region 10 Conference (TENCON), pp. 7-12. (Scopus)

9. J. Siva Ramakrishna, and Hariharan Ramasangu, (2017). Classification of cognitive state using clustering based maximum margin feature selection framework, Proceedings of the International Conference on Advances in Computing, Communications, and Informatics (ICACCI), pp. 1092-1096. (Scopus)

10. J. Siva Ramakrishna, and Hariharan Ramasangu, (2016). Classification of cognitive state using statistics of split time series, Proceedings of the IEEE Annual India Conference (INDICON), pp. 1-5. (Scopus)

11. J. Siva Ramakrishna, and Hariharan Ramasangu, (2016). Cognitive state classification using clustering-classifier hybrid method, Proceedings of the International Conference on Advances in Computing, Communications, and Informatics (ICACCI), pp. 1880-1885. (Scopus)

Personal Details

Date of Birth	:	30th June 1984.
Marital Status	:	Married.
Address	:	S/O J. Ahobila Sastry, H. No 83/6, Vijaya Lakshmi Nagar, Behind Santhosh Nagar, Kurnool, Andhra Pradesh-518002.

Date: Signature