SIDDHARTH R

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Education

2016–2021 **Ph.D.**, *Computer Science & Engineering, National Institute of Technology Puducherry*, India
Advisor: Prof. G. Aghila

2012–2014 **M.Tech**, *Information Technology, Madras Institute of Technology, Anna University*, Chennai, *Grade - 8.43/10*

2009–2012 **B.E**, *Computer Science & Engineering, Karpagam University*, Coimbatore, *Grade - 87.02/100*

Experience

Academic

10/04/2024 – Present **Assistant Professor**, *Department of DS&IS*, Indian Institute of Information Technology Dharwad, Karnataka, India

14/09/2021 – 17/12/2021 **Guest Lecturer**, *Department of CSE*, National Institute of Technology Puducherry, Karaikal
Course taught to PG students: Open source programming

02/06/2014 – 28/04/2016 **Assistant Professor**, *Department of CSE*, AAA College of Engineering and Technology, Sivakasi
Courses taught to UG students: Object-oriented programming, Data structures and Data mining

Research

27/12/2022 – 03/04/2024 **Post-Doctoral Research Fellow**, *IIT Palakkad Technology IHub Foundation (IPTIF), Palakkad*,
Project title: Explainable AI through weight space characterization
Advisor: Prof. Vijendran Venkoparao

20/12/2021 – 09/12/2022 **Research Program Manager**, *Robert Bosch Centre for Data Science and AI, IIT Madras*, Chennai
Job description: Research fellowships shortlisting, coordinating research meetings, updating the research publications

29/04/2016 – 30/04/2021 **Research Scholar**, *National Institute of Technology Puducherry*, Karaikal
Job description: Research in high dimensional data analysis and also assisted for teaching in Computer programming, Data mining and Research writing

Publications

Journals

S. Hemachandiran, R. Siddharth and G. Aghila, *"A digital image colorimetry approach for identifying fuel types in downstream petroleum sector"* in **International Journal of Information Technology**, 2023.

R. Siddharth and G. Aghila, *"A Fog-Assisted Framework for Intelligent Video Preprocessing in Cloud-based Video Surveillance as a Service"* in **IEEE Transactions on Sustainable Computing**, Vol.7, pp. 825-838, 2022.

R. Siddharth and G. Aghila, *"RandPro- A practical implementation of random projection-based feature extraction for high dimensional multivariate data analysis in R"*, in **SoftwareX** , Vol. 12, July-Dec 2020.

R. Siddharth and G. Aghila, *"A Light Weight Background Subtraction Algorithm for Motion Detection in Fog Computing"* in **IEEE Letters of the Computer Society**, vol. 3, no. 1, pp. 17-20, Jan.-June 2020.

R. Siddharth and G. Aghila *"A Data-Independent Reusable Projection (DIRP) Technique for Dimension Reduction in Big Data Classification Using k-Nearest Neighbor (k-NN)"* in **National Academy Science Letters** 43, 13–21, 2020.

Conferences

Siddharth R, Banerjee A and Vijendran V, *"Characterizing Neural Network Weights for Class Imbalanced Learning"* in IEEE Pune Section **International Conference** (PuneCon), 2023.

Hemachandiran S, Aghila G and Siddharth R, *"A Smartphone-based Digital Image Colorimetry Model for Identifying Fuel Types in Downstream Petroleum Sector"* in **International Conference** on Future Technologies (ICOFT 2021) in Manufacturing, Automation, Design and Energy, 2021.

S. Ramachandran, S. Chithan and Siddharth Ravindran, *"A cost-effective approach towards storage and privacy preserving for intermediate data sets in cloud environment,"* in IEEE **International Conference** on Recent Trends in Information Technology, 2014.

Books/Book chapters

Hemachandiran S., Aghila G., Siddharth R. *"Automation to Find Adulteration in Downstream Petroleum Monitoring Using Machine Learning: An Overview"*. Recent Advances in Manufacturing, Automation, Design and Energy Technologies. **Lecture Notes in Mechanical Engineering**, Springer, 2022.

Siddharth R and Aghila G, *"A Privacy-Preserving Feature Extraction Method for Big Data Analytics Based on Data-Independent Reusable Projection."* **Handbook of Research on Cloud Computing and Big Data Applications in IoT**, IGI Global, 2019, pp. 151-169.

Patents

Aghila G and Siddharth R, *"System for Storage Reduction in Cloud Based Video Surveillance and Method Thereof", Application number:202041041376*, Patent number: 408227, Status: Granted

Research Interests

Data Preprocessing Machine Learning Feature Extraction Compressive Privacy

Technical Skills

Programming Software

- R Programming
- Python with OpenCV
- C, C++ and Core Java

Research Writing & Visualization

- LaTeX
- MatPlotLib

Achievements & Honors

- Contributed my research expertise to the IPTIF IMPACT Project call 2023 and NASSCOM AI Gamechangers 2022.
- My software package is used by researchers from the University of Washington and IIT Kanpur.
- Qualified in GATE 2012 with a score of 370.
- Won proficiency certificate in B.E third semester and seventh semester exam.
- Won 1st prize in Debugging in the C-day inter-college competition.

Journal Reviewer

IEEE Access Computers, Materials & Continua National Academy Science Letters

Technical Talks Delivered

"R Programming for Data Analytics" at NIT Puducherry in ATAL sponsored Faculty Development Program, 26.08.2021 to 27.08.2021.

"Opportunities in AI & ML based startup Ideas" at Government Victoria College, Palakkad sponsored by Kerala Institute of Entrepreneurship Development, 19.01.2024.

"The Nuts and Bolts of Fine-tuning LLMs" at Coimbatore Institute of Technology in Online Faculty Development Program, 23.02.2024.

References

Prof. G. Aghila
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Prof. Vijendran Venkoparao
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