HARDIK PRABHU — CURRICULUM VITAE

Machine Learning Researcher (Remote) – CloudAEye, Inc.

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HIGHLIGHTS

○ 4+ years of experience in machine learning research and development in industry and academia.

○ Several first-author publications in high-impact venues (AAAI, ACM Buildsys, Nature Scientific Reports).

○ Academic and research experience at tier 1 institutes in India (CMI, IISc).

EXPERIENCE

CloudAEye, Inc.   **Fremont, CA, USA (remote)**

Machine Learning Researcher   *July 2024 - Present*

○ Built an Agentic RAG system with custom knowledge graph retrieval, leveraging LLMs to automate code review processes and provide intelligent repository-level code analysis and Q&A capabilities; enhanced and optimised the sequential log anomaly detection algorithm.

Machine Learning Engineer   *July 2021 - Oct 2022*

○ Developed and deployed advanced deep learning and machine learning solutions specializing in anomaly detection within logs and metrics produced by cloud-native applications; utilized deep learning techniques such as LSTMs and Variational Autoencoders (VAEs); conducted technical interviews of candidates applying for the ML Engineer role.

Indian Institute of Science (IISc)   **Bengaluru, India**

Research Associate   *Nov 2023 - June 2024*

○ Led a project on applying a novel GAN-based solution in energy anomaly detection.

○ Authored a paper on the findings as first author, which was presented at the AI4TS workshop at the AAAI 24.

FLAME University   **Pune, India**

Research Associate   *Jan 2023 - Nov 2023*

○ Led projects focusing on multiple areas including Explainable AI and Genetic Algorithms; served as a Teaching Assistant for courses related to Computational Modelling, Quantitative Methods and Machine Learning.

○ Produced 3 Q1 journal papers, an ACM BuildSys workshop paper, and a Springer book chapter, all as the first author.

CMI Algolabs   **Chennai, India**

Research Intern   *May 2020 - Aug 2020*

○ Created a Python-based tool for a software company for mapping functionality script to software documentation by applying Latent Dirichlet Allocation, a topic modelling technique.

EDUCATION

Chennai Mathematical Institute (CMI)   **Chennai, India**
Master of Science in Data Science, CGPA : 8.38/10   *Aug 2019 - May 2021*

D.G Ruparel College, Mumbai University   **Mumbai, India**
Bachelor of Science in Mathematics, CGPA : 8.75/10   *Aug 2016 - April 2019*

SELECTED FIRST AUTHOR PUBLICATIONS

[1] **Prabhu, H.**, Valadi, J.K. and Arjunan, P., Generative Adversarial Network with Soft-Dynamic TimeWarping and Parallel Reconstruction for Energy Time Series Anomaly Detection. In Proceedings of AI4TS workshop of AAAI, 2024 (**CORE Rank: A***)

[2] **Prabhu, H.**, Valadi, J.K. and Arjunan, P., Explainable AI for Energy Prediction and Anomaly Detection in Smart Energy Buildings. In Proceedings of the 10th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation.(pp. 472-475).(**CORE Rank: A**)

[3] **Prabhu, H.**, Sane, A., Dhadwal, R., Parlikkad, N.R. and Valadi, J.K., 2023. Interpretation of Drop Size Predictions from a Random Forest Model Using Local Interpretable Model-Agnostic Explanations (LIME) in a Rotating Disc Contactor. Industrial & Engineering Chemistry Research. (**Q1**)

[4] **Prabhu, H.**, Bhosale, H., Sane, A. et al., Protein feature engineering framework for AMPylation site prediction. Scientific Reports 14, 8695 (2024). (**Q1**)

TEACHING EXPERIENCE

o **Teaching Assistant, FLAME University** (Oct 2023 - Nov 2023): Research Methodology - Quantitative Methods. Taught PhD students in social sciences: intro to statistics, sampling, parameter estimation, hypothesis testing.

o **Teaching Assistant, FLAME University** (Jan 2023 - May 2023): CSIT 331 Machine Learning I, CSIT 121 Computational Modeling. Taught undergraduates: intro to statistics, decision trees, clustering algorithms, and optimization using gradient descent.

SKILLS

Programming: Python (PyTorch, TensorFlow, Scikit-learn, NumPy, Pandas, Pymoo), LaTeX, Git
Coursework: Advanced Machine Learning, Bayesian Data Analysis, Multivariate Statistics, Reinforcement Learning, Natural Language Processing, Stochastic Processes