

Aditya Akilesh Mantha

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SUMMARY

Excelled as Data Scientist & ML Engineer with 1+ years of industry experience in building and deploying scalable machine learning solutions. Experienced in end-to-end AI model development, including data preprocessing, model training, optimization, and deployment.

TECHNICAL SKILLS

Languages/Technologies: Python, C, R, SQL, MATLAB, MPI, OpenMP, Tableau, PowerBI

ML Libraries/Frameworks: TensorFlow, Pytorch, Keras, Scikit-learn, NumPy, Pandas, Matplotlib, Seaborn, RL, Stable Baseline

Data Skills: EDA, Data Visualization, Statistical Modeling, Reinforcement Learning, Generative AI models, Model Validation

Software Development Tools & Systems: Git, CI/CD pipelines, Jira, Confluence, Linux, Azure ML, Apache Spark

EXPERIENCE

ElevateMe

Jan 2025-Present

Data Analytics & Machine Learning Fellow Trainee

Columbus, OH

- Engaged in over 150 hours of hands-on learning, applying **data analytics** and **ML techniques** to solve real-world problems.
- Cleaned and analyzed 30,000-record real estate dataset leveraging **Python**, performing data imputation, anomaly correction & feature engineering, created **data visualizations** to uncover key factors influencing property prices by type and location.
- Initiated and led financial health analysis on 20+ years of data with **Python**, crafting descriptive statistics, trend lines, correlation Heatmaps and communicated operational costs were primary cost driver, comprising 61% of total expenses.
- Directed and performed HR employee attrition analysis on 1.5K employees with **SQLite** and advanced SQL queries; visualized attrition trends in **Tableau** to support strategic decision-making across demographic and job-related factors.

Eaton Corporation

May 2024-Dec 2024

Grid Intelligence Intern

Golden, CO

- Implemented **A2C** and **PPO RL algorithms** for voltage control in microgrid through **CYME** and **Stable Baseline**, optimizing operations of voltage regulators and capacitor banks, reducing switching operations by 10%.
- Employed **TensorFlow** to develop **LSTM** & **ARIMA** models for load & solar forecasting, attaining less than 5% forecast error and trained **VAE** model for switchgear failure prediction, enabling proactive maintenance strategies with 85% accuracy.
- Demonstrated collaborative skills through cross-functional teamwork, managing projects, delivering weekly updates through presentations, and utilizing **GitHub** for version control, contributing to project success.

Rubix Pvt. Ltd.

Jan 2022-May 2022

Data Science Intern

Bangalore, India

- Spearheaded and initiated development of **CNNs** & **RNNs** for heart disease prediction and leaf disease classification, attaining 92% accuracy, enhancing predictive capabilities and refining workflows with cross-functional teams.
- Analyzed and visualized complex datasets using **Python** and its libraries, deriving critical insights for decision making, and presented findings in weekly **PowerPoint** presentations to guide strategic actions.

RESEARCH

Iowa State University

May 2023-Dec 2024

Graduate Research and Teaching Assistant | [Master's Thesis](#)

Ames, IA

- Proposed and designed Scenario based data generation framework to generate **faults** & **cyberattacks** in HIL CPS testbed and engineered **LSTM**-based anomaly detection models, achieving 99.01% F1 score in identifying faults and cyberattacks.
- Facilitated SE 185 lab sessions for 100+ students, teaching **C language** and evaluating performance by grading and feedback.

PROJECTS

Gen AI Agents | [GitHub](#)

- Led implementation of **Gen AI Agents** with **Google Gemini 1.5 Flash**, automating 70% of content with Streamlit web app integrates diverse NLP tasks. Enhanced accuracy in content safety evaluations, communicated results clearly.

PDF Insight bot | [GitHub](#)

- Directed AI-powered PDF Insight Bot development with **LangChain**, **FAISS**, **Gemini 1.5 Flash** for querying PDFs up to 100 pages. Integrated **Azure SQL** and Google AI Embeddings to optimize vector pipelines, cutting search latency by 40%.

Solar Generation Forecasting | [GitHub](#)

- Spearheaded design of a multivariate **LSTM** model with meteorological features for solar forecasting, achieving an R2 score of 0.98. Utilized 2-layer LSTM architecture with moving window sequence generation and dropout regularization.

EDUCATION

Iowa State University

Aug 2022-Dec 2024

Master of Science in Computer Engineering – GPA 3.93/4.00

Ames, IA

Gayatri Vidya Parishad of College of Engineering

Aug 2015-May 2019

Bachelor of Technology in Electrical and Electronics Engineering – GPA 7.77/10.00

Visakhapatnam, AP

PUBLICATIONS

- Mantha, Aditya Akilesh**, Arif Hussain, and Gelli Ravikumar. "Hil testbed-based auto feature extraction and data generation framework for ml/dl-based anomaly detection and classification." 2024 IEEE Power & Energy Society (ISGT). [IEEE](#), 2024.
- Kumar, Kundan, **Mantha, Aditya Akilesh**, and Gelli Ravikumar. "Bayesian Optimization for Deep Reinforcement Learning for Robust Volt-Var Control." 2024 IEEE Power & Energy Society General Meeting (PESGM). [IEEE](#), 2024.