

HEMANTH THULASIRAMAN

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Education

University of Maryland

M.S Data Science

Coursework: Probability and Statistics, Principles of Data Science, Principles of Machine Learning

Aug 2025 – Present

Maryland , United States

Vellore Institute of Technology

B.Tech in Computer Science and Engineering

Coursework: DSA, NLP, Artificial Intelligence, Data Science, Database Systems, Computer Networks, Computer Vision

Sep 2021 – May 2025

TamilNadu, India

Experience

OnMobile Global Limited

Data Science Intern, Business Intelligence Team

Jan 2025 – Jul 2025

Bengaluru, India

- Developed and deployed an LSTM-based revenue forecasting model to predict monthly break-even points, enabling the finance team to optimize spend plans by **15%**.
- Performed KPI-driven data analysis with BigQuery, building dashboards to improve decision-making.
- Automated ETL pipelines for revenue datasets, reducing manual data processing time by **10+** hours per week.
- Created interactive Power BI dashboards integrating BigQuery data, reducing report generation time by **60%**.

ELPIS IT Solutions Pvt. Ltd

Machine Learning Intern

Aug 2023 – Oct 2023

Bengaluru, India

- Streamlined time-series data preparation by building an automated pipeline that minimized manual intervention.
- Tested and compared multiple forecasting algorithms, including ARIMA and FBProphet, to improve prediction reliability.
- Automated the evaluation and ranking of forecasting models using standardized error metrics, reducing manual experimentation effort by **50%**.

Projects

Hybrid Log Classification System | Python, Logistic Regression, Groq, FastAPI

Aug 2025

- Implemented a hybrid NLP log classification system in Python that combines regex rules, SentenceTransformer embeddings (all-MiniLM-L6-v2) + Logistic Regression, and a Groq-hosted LLM to robustly classify heterogeneous application logs.
- Deployed the solution as a FastAPI service with a CSV upload endpoint that returns labeled outputs, using modular processors and persisted models for reproducible, production-ready inference.

Stock Market Research Assistant using LangChain | Langchain, Python, Firecrawl, Gemini

May 2025

- Built a financial research assistant using Firecrawl for web scraping and Hugging Face embeddings with ChromaDB in a RAG setup for semantic search.
- Integrated **LangChain** with **Gemini LLM** to enable real-time, context-aware market analysis through natural language queries.

Publications

Two-Stage Optimized Intrusion Detection (link) | Python, Scikit-learn, TensorFlow

Jul 2024

- Engineered a two-stage intrusion detection system on the NSL-KDD dataset with **30+** features, incorporating advanced feature selection techniques such as Mutual Information, F-score, and Hippopotamus Optimization to derive an optimal subset.
- Trained multiple machine learning and deep learning models using Scikit-learn and TensorFlow, achieving a **94%** classification accuracy and demonstrating the effectiveness of hybrid feature selection in strengthening cybersecurity threat detection.

Technical Skills

Languages: Python, C/C++, R, Java, SQL

Libraries & Frameworks: TensorFlow, LangChain/LangGraph, OpenCV, Matplotlib, NumPy, Pandas, Seaborn, PyTorch, Keras, Scikit-learn, Hugging Face

Deployment: Flask, AWS, FastAPI, Git/GitHub, Docker

Certifications: Python for time series data analysis (Udemy), Python for machine learning and data science masterclass (Udemy), Supervised machine learning: Regression and classification (Deeplearning.ai)

Leadership / Extracurricular

Organizing member, VIT: Organized a student outreach initiative for the Computer Science department at VIT Vellore, conducting workshops that educated **100+** school students in a remote village and improved their awareness.