

Lingeswaran Mithurshan

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[LinkedIn](#) | [Portfolio](#) | [GitHub](#)

PROFESSIONAL SUMMARY

Results-driven Data Scientist with strong expertise in **Machine Learning**, **Deep Learning**, and **Generative AI**, skilled at designing and deploying end-to-end AI solutions. Proficient in **Python**, **SQL**, **TensorFlow**, **LangChain**, and **AWS**, with hands-on experience in NLP, Computer Vision, and MLOps. Demonstrated ability to improve model accuracy, build scalable AI pipelines, and create interactive applications for real-world problem solving. Passionate about leveraging AI to deliver measurable business value.

TECHNICAL SKILLS

- **Programming & Databases:** Python, SQL
- **Machine Learning & Deep Learning:** Scikit-learn, TensorFlow, Keras, Random Forest, VGG16, Model Fine-tuning
- **Data Analysis & Visualization:** Pandas, NumPy, Matplotlib, Seaborn, Power BI
- **Web Deployment & DevOps:** Streamlit, FastAPI, Docker, Git, MLflow, API Development
- **Cloud Platforms:** AWS (EC2, S3), Cloud Deployment
- **Agentic & Generative AI:** LangChain, LangGraph, GPT Models (GPT-4o, GPT-3.5), Mixtral, RAG (Retrieval-Augmented Generation), Prompt Engineering
- **AI Domains:** NLP, Computer Vision, MLOps, Recommendation Systems, AI Agents
- **Tools & Frameworks:** Hugging Face Transformers, Sentence Transformers, FAISS, Pydantic, Apify SDK

EDUCATION

B.Sc. Management Studies and Commerce

University of Sri Jayawardenepura

Sri Lanka

Expected 2026

Certified Data Scientist (IIT-M)

GUVI India

Online

2025

PROJECTS

HR-Recruitment-AI-Agent-System — *Generative AI, LangChain, Streamlit, FastAPI, Groq*

- Developed a modular AI recruitment assistant leveraging **LangGraph** to automate resume parsing, semantic scoring, and candidate communication, reducing manual screening time by 60%.
- Engineered an **ATS compatibility scoring** system using vector similarity and embedding techniques with GPT-4o, improving candidate ranking accuracy by 25%.
- Integrated automated decision logic with thresholds to streamline candidate status (reject, review, accept) and personalized email notifications through a user-friendly Streamlit dashboard.
- Deployed the system on a FastAPI backend with Groq LLM inference, ensuring scalable, low-latency processing for real-time recruitment workflows.

Role-Based Access Control Chatbot — *RAG, LangChain, FastAPI, Streamlit, OpenAI*

- Built a secure internal chatbot using **Retrieval-Augmented Generation (RAG)** and a FAISS vector store to enable fast, context-aware answers from large document corpora.
- Implemented **Role-Based Access Control (RBAC)** mechanisms to restrict access to sensitive data by department (Finance, HR, Marketing), improving data governance and compliance.
- Designed a conversational Streamlit interface integrated with FastAPI, enabling seamless natural language queries and generating context-rich responses with GPT-4o models.

- Enhanced system efficiency by optimizing vector search and caching strategies, reducing average query response time by 40%.

Wine Quality Prediction & AI Recommendations — *ML, Streamlit, RandomForest, LLM*

- Designed and trained a **Random Forest classifier** achieving **93% accuracy** on wine quality prediction, outperforming baseline models by 13%.
- Integrated a GPT-based LLM to provide personalized wine recommendations, food pairings, and serving tips, enhancing user engagement on the Streamlit app.
- Implemented interactive UI features to visualize prediction confidence and feature importances, aiding user trust and transparency.

Plant Disease Detection & AI Report System — *TensorFlow (VGG16), Streamlit, LLM*

- Fine-tuned a **VGG16 convolutional neural network** to classify tomato and pepper plant diseases with **high accuracy (90%)**, supporting early intervention.
- Developed an automated LLM-powered diagnostic report generator providing detailed analysis of symptoms, causes, and treatment recommendations, increasing usability for farmers.
- Created an intuitive Streamlit web app to enable remote disease diagnosis with image upload, facilitating scalable agricultural support.

EXPERIENCE

Data Science Intern

Remote

Unified Mentor Pvt Ltd

June 2025 – Sep 2025

- Led end-to-end data science projects including data cleaning, exploratory data analysis, feature engineering, model development, and evaluation on real-world datasets.
- Applied and fine-tuned machine learning models (e.g., Random Forest, XGBoost) to improve predictive accuracy by over 20%, delivering actionable insights to stakeholders.
- Collaborated with cross-functional teams to deploy ML models into production using FastAPI and Streamlit, enabling interactive dashboards for business users.
- Implemented data pipelines and model monitoring solutions to ensure data quality and model performance consistency in production environments.

AI, Data Analytics, and Machine Learning Internships

Remote

NoviTech R&D Pvt Ltd

May 2024 – Oct 2024

- Designed, trained, and optimized multiple ML pipelines focused on classification and NLP tasks, improving baseline model accuracy by an average of 15%.
- Performed advanced data preprocessing and feature engineering using Python libraries (Pandas, NumPy), enhancing data quality and model interpretability.
- Built interactive data visualization dashboards with Power BI and Matplotlib to communicate key insights effectively to business stakeholders.
- Contributed to prototyping AI-powered solutions using transformer models and Hugging Face Transformers library, accelerating research and development cycles.

LANGUAGES

- **English:** Professional Working Proficiency
- **Tamil:** Native Proficiency

CERTIFICATES

- **Generative AI with NLP, Agentic AI and Fine Tuning** – Euron AI Academy
- **Build RBAC Chatbot** – Codebasics
- **Deep Learning Masters** – Euron AI Academy
- **LLMOps (Large Language Model Operations)** – Euron AI Academy