



Janeesha Wickramasinghe

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PROFILE

Passionate about Machine Learning and data-driven systems, with hands-on experience building end-to-end solutions. I've worked across the full lifecycle, from model development and evaluation to deployment, monitoring, and optimization. I enjoy turning ideas into scalable implementations, collaborate effectively in team environments, and adapt quickly to new challenges through continuous learning. My interests include Data Engineering, Data Science, and ML-focused roles(MLOps, Computer Vision, NLP, Agentic AI), while remaining open to Software Engineering opportunities.

EDUCATION

University of Moratuwa BSc Engineering (Hons) in Computer Science and Engineering • CGPA : 3.60, Specializing in Data Science • Placement on the Dean's List: Semester 05 and 06	2022 - Present
Visakha Vidyalaya, Colombo 04 3As in G.C.E. A/L (Physical Science Stream) Z-Score : 2.4283	2018 – 2020

PROJECTS

Final Year Project - Cost Optimized RAG with Reinforcement Learning • Designed a retrieval router for RAG, where an RL agent decides when to retrieve from vector store vs answer directly, reducing unnecessary retrieval calls. • Implemented a history-aware gating policy trained with reward signals. <i>Tech Stack:</i> PyTorch, Deep RL(DQN), ChromaDB	Aug. 2025 – Present
MLOps Pipeline for Medical Image Segmentation • Built a U-Net MRI tumor segmentation service with FastAPI endpoints for mask prediction. • Productionized the ML workflow with modular pipelines (load, preprocess, train, tune, serve) and MLflow tracking, then containerized and deployed on AWS. <i>Tech Stack:</i> TensorFlow, FastAPI, MLflow, Docker, AWS (ECS/Fargate, ECR, S3, ALB), CI/CD	Nov. 2025
YouTube Analytics ELT Platform • Built an ELT pipeline ingesting YouTube API data into Kafka, and load into a data warehouse. • Orchestrated workflows with Airflow, validated DAGs with Airflow DAG tests, and implemented data quality checks using SODA. • Built a Spring Boot analytics microservice, containerized the platform, and automated testing. <i>Tech Stack:</i> Python, SQL, Kafka, Airflow, PostgreSQL, DBeaver, Pytest, Airflow DAG Tests, SODA, Docker, GitHub Actions, Spring Boot	Jan. 2026
Multi-Agent Recommendation System for E-commerce • Built a multi-agent workflow that converts grocery queries into personalized recommendations. • Integrated web scraping, knowledge graph for query expansion and MCP tool connections. Added guardrails, human-in-the-loop approvals, Langfuse observability and prompt/agent evaluation. <i>Tech Stack:</i> Python, LangGraph, Groq, Crawl4AI, React, MongoDB, Langfuse, Promptfoo	Oct. 2025

CAFE: Bias-Aware Toxicity Detection Framework

Sep. 2025

- Fine-tuned a transformer toxicity classifier on the Jigsaw dataset to score online comments as toxic/non-toxic to test fairness across groups.
- Reduced identity bias by custom sample weighting and added a multi-task head to predict toxicity subtypes alongside the main toxicity score.

Tech Stack: Python, TensorFlow, Hugging Face Transformers, Pandas, Scikit-learn

EXPERIENCE

IronOne Technologies - ML Engineer Intern

Dec. 2024 - May 2025

- Worked on developing machine learning-based solutions to model risk of credit card customers.
- Contributed for feature engineering, model development along with training, validation and evaluation to predict customer risk.

CERTIFICATIONS

Deep Learning Specialization by DeepLearning.AI (5 Course Specialization)	↗
Machine Learning Specialization by DeepLearning.AI (3 Course Specialization)	↗
AWS Academy Machine Learning Foundations by AWS Academy	↗
Fundamentals of Deep Learning by NVIDIA	↗
Build Data Lakes and Data Warehouses on Google Cloud by Google Cloud	↗

AWARDS

Champion - Predicta ML Kaggle Competition. Achieved a 0.92 public leaderboard accuracy	Jun. 2024
Champion - INNOVA, Tech Idea Hackathon	Jul. 2025
Champion - IntelliHack 5.0 ML & AI Hackathon	Jun. 2025
1 st Runner Up - Sri Lanka AI Challenge	Oct. 2024
2 nd Runner Up - Evolution AI Islandwide Ideathon	Feb. 2022
2 nd Runner Up - SDG Youth Challenge	Nov. 2025
Finalist - Sri Lankan Engineers in South Australia Future Founder	May 2024
Best Undergraduate AI Project Award - SLAAI	Nov. 2025

SKILLS

Programming Languages: Python, Java, JavaScript, SQL
Technical: Machine Learning, Data Science, MLOps, Agentic AI, Computer Vision, NLP
Libraries: PyTorch, TensorFlow, Scikit-learn, Pandas, Numpy, Matplotlib, Seaborn, Hugging Face
Frameworks: Spring Boot, FastAPI, Express, NodeJS, ReactJS, Flutter, Langchain, LangGraph
Data/ DB: MySQL, PostgreSQL, MongoDB, Airflow, Kafka, DBeaver
Cloud & MLOps: AWS (S3, EC2, ECR, ECS), GCP, Docker, MLflow, Optuna, Langfuse, Pytest
Personal Skills: Leadership, Planning, Adaptability, Problem solving, Team player

EXTRACURRICULAR ACTIVITIES

Co-Chair - Enigma'24 Hackathon Mathematics Society	Dec. 2023 – Mar. 2024
Core Committee - ADScAI Summit CSE Department	Apr. 2025

REFEREES

Prof. Dulani Meedeniya
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