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JANEESHA WICKRAMASINGHE

ABOUT ME

Passionate about Machine Learning and data-driven systems, with hands-on experience building end-to-end solutions. I enjoy turning ideas into scalable implementations, collaborate effectively in teams, and adapt quickly to new challenges through continuous learning.

SKILLS

- **Programming Languages:** Python | Java | JavaScript | SQL
- **Database:** MySQL | MongoDB | PostgreSQL
- **Technical Fields:** Machine Learning | Data Science | Data Engineering | NLP | Agentic AI | MLOps
- **Frameworks and Libraries:** PyTorch | TensorFlow | Spring Boot | FastAPI | LangGraph | React | NodeJS
- **Tools:** AWS | Docker | MLflow | Langfuse | Git

HIGHLIGHTS

- Deans List (Semester 5, 6)
- Predicta ML Kaggle Comp. 1st Place
- IntelliHack AI Hackathon 1st Place
- INNOVA Tech Hackathon 1st Place
- Sri Lanka AI Challenge runners up
- Evolution AI Ideathon 2nd runners up
- SDG Youth Challenge 2nd runners up
- SLAAI Best Undergraduate AI Project Award

EXTRA CURRICULAR ACTIVITIES

- Mathematics Society, Project Co-Chair

EDUCATION

University of Moratuwa

2022 - Present

BSc Eng Hons, Computer Science and Engineering

- Stream - Data Science and Engineering | CGPA - 3.60

Visakha Vidyalaya, Colombo 04

2018 - 2020

- AL 2020 | 3A | IR - 222
- OL 2017 | 9A

WORK EXPERIENCE

IronOne Technologies (Pvt) Ltd

2024 Dec - 2025 May

Machine Learning Engineer Intern

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

PROJECTS

Final Year Project - Cost Optimized RAG

2025 Aug - Present

PyTorch | Deep Reinforcement Learning | ChromaDB

- Designed a retrieval router for RAG, where an RL agent decides when to retrieve from vector store, reducing unnecessary retrieval calls.
- Implemented a history-aware gating policy trained with reward signals.

MLOps Pipeline for Image Segmentation

2025 Nov

TensorFlow | FastAPI | MLflow | Docker | AWS | CI/CD

- Built a U-Net MRI tumor segmentation service with FastAPI endpoints for mask prediction.
- Productionized the ML workflow with modular pipelines and MLflow tracking, then containerized and deployed on AWS.

Multi-Agent system for E-commerce

2025 Oct

Python | LangGraph | Groq | React | MongoDB | Langfuse

- Built a multi-agent workflow that converts grocery queries into personalized recommendations.
- Integrated knowledge graph for query expansion and MCP tool connections. Added guardrails, Langfuse observability and prompt/agent evaluation.

YouTube ELT Data Pipeline

2026 Jan

Python | SQL | Kafka | Airflow | PostgreSQL | Docker | Spring Boot

- Built an ELT pipeline ingesting YouTube API data into Kafka, and load into a PostgreSQL warehouse.
- Orchestrated workflows with Airflow, validated DAGs, and implemented data quality checks using SODA.
- Built a Spring Boot analytics microservice and containerized the platform.

CAFE: Bias-Aware Toxicity Detection Framework

2025 Sep

Python | TensorFlow | Hugging Face Transformers | Pandas

- Fine-tuned a transformer toxicity classifier on the Jigsaw dataset to score online comments as toxic/non-toxic to test fairness across groups.