

ASHAN WICKRAMANAYAKA

Colombo, Sri Lanka

+94 740288813 | wmashan2@gmail.com

linkedin.com/in/ashanwickramanayaka | github.com/wmashan | ashanwickramanayaka.dev

PROFILE

Third-year Information Technology undergraduate with strong Python programming experience and a focus on Artificial Intelligence, Machine Learning, and MLOps. Experienced in building end-to-end ML systems, data pipelines, and AI-powered applications, including model training, experiment tracking, and deployment. Interested in developing scalable AI solutions and data-driven systems for real-world problems.

EDUCATION

BSc (Hons) in Information Technology.

2024 – Present

Faculty of Science, University of Kelaniya

CGPA: 3.57/4.00 (Second Class Upper Division)

Diploma in Information Technology & English.

2018 – 2019

ESOFT Metro Campus

PROFESSIONAL EXPERIENCE

Software Engineering Intern – Sri Lanka Bureau of Foreign Employment. [↗](#)

Aug 2025 – Feb 2026

- Collaborated on designing scalable backend architecture to support future AI-driven analytics.
- Contributed to development and deployment of an enterprise HRM system serving over 1,000 employees.
- Designed and implemented secure ASP.NET Core APIs handling employee records, leave workflows, and HR operations.
- Supported IIS production deployment and CI/CD workflows, reducing manual deployment errors

PROJECTS

RAG Document Assistant

- Designed an event-driven RAG pipeline for intelligent PDF querying using OpenAI embeddings and Qdrant
- Built scalable ingestion and query workflows with retry logic, rate limiting, and observability using Inngest.
- Developed a production-ready FastAPI backend with Pydantic validation and structured error handling.
- Containerized services and enabled reproducible deployment environments.

Technologies: Python, FastAPI, Qdrant, OpenAI, Inngest, Docker

Customer Churn Prediction ML Pipeline

- Built an end-to-end machine learning pipeline to predict telecom customer churn using historical customer data.
- Developed data preprocessing and feature engineering workflows using Pandas and Scikit-learn to transform raw datasets into model-ready features.
- Trained and evaluated multiple models including Logistic Regression and Random Forest, comparing performance using ROC-AUC and F1 score.
- Implemented MLflow experiment tracking and model versioning, and deployed the best model as a FastAPI prediction API containerized with Docker.

Technologies: Python, Pandas, Scikit-learn, MLflow, FastAPI, Docker

AI-Powered Resume Analysis Platform

- Built a full-stack AI platform that evaluates resumes using Llama 3.2 (Ollama) across 37+ job roles.
- Developed a Python ML microservice implementing ATS scoring, TF-IDF keyword analysis, and resume quality grading.
- Designed modular microservice architecture integrating AI inference, backend APIs, and automated text extraction.

Technologies: React, Node.js, Flask, Python, Ollama, TF-IDF, REST APIs, NLP

TensorFlow MNIST Digit Classification Model

- Built a deep neural network for handwritten digit recognition using TensorFlow/Keras, achieving 97.5% accuracy on the MNIST dataset
- Improved model performance from 92.5% to 97.5% by introducing ReLU-activated hidden layers and optimized training parameters.
- Performed data preprocessing, normalization, and model evaluation using confusion matrix and training metrics.
- Visualized model performance and training curves using Matplotlib and Seaborn.

Technologies: TensorFlow, Keras, NumPy, Pandas, Seaborn, Matplotlib, Jupyter Notebooks, Google Colab

TECHNICAL SKILLS

Artificial Intelligence:	Machine Learning, Deep Learning, Neural Networks, CNNs, Retrieval-Augmented Generation (RAG), Natural Language Processing (NLP)
Frameworks & Libraries:	TensorFlow, PyTorch, Keras, Scikit-Learn, Hugging Face, LangChain, Pandas, Matplotlib, Seaborn
Programming Languages:	Python, JavaScript, C, C++, Java, OOP, Event-Driven Programming
Backend & MLOps:	FastAPI, Docker, MLflow, GitHub Actions, CI/CD, Model Deployment, n8n
Data Engineering & Mathematics:	Linear Algebra, Probability, Statistics, EDA, Data Preprocessing, Feature Engineering, Data Structures
Databases & Vector Stores:	MySQL, PostgreSQL, MongoDB, Pinecone, Qdrant
Cloud & AI Platforms:	Google Vertex AI, Google AI Studio, Google Flow, AWS, Microsoft Azure, Microsoft Copilot Studio, Azure AI Foundry, Google Colab
Web Development:	React, Next.js, Three.js, Node.js, Express.js, HTML, CSS, JavaScript
Soft Skills:	Teamwork, Time Management, Critical Thinking, Problem Solving

CERTIFICATIONS

Machine Learning Specialization –	DeepLearning.AI
RAG and LangChain –	IBM
Azure AI Fundamentals –	Microsoft
Machine Learning Foundations –	AWS Educate
Introduction to TensorFlow –	DeepLearning.AI
Introduction to Vertex Ai –	Google Cloud
Aviatrix Certified Engineer (ACE) –	Multicloud Network Associate Aviatrix, Inc

VOLUNTEERING

Microsoft IT PRO Community Sri Lanka 2025 – Present <i>Member of Media Team</i>	AI Driven Sri Lanka Community Community Talk May 2024 – 2025 <i>Member of Media Team</i>	Rotaract University of Kelaniya 2024 – 2025 <i>PR Coordinator</i>
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ACHIEVEMENTS

AI Agentic Hackathon Finalist (Microsoft & Tech One Global Ltd, Sep 2025)
Built a **multi-agent Ai system** using **Microsoft Copilot Studio**; collaborative Ai solution development.

IEEE Xtreme 19.0 (IEEE, Oct 2025)
Achieved **Global Rank 998** out of 9,000+ teams in 24-hour competitive programming contest.

Kelani Xtreme **2025** (IEEE University of Kelaniya, Oct 2025)
Secured **8th place (Top 10 teams)**; 850.0 score in competitive programming challenge.

REFERENCES

Dr. Chathura Rajapakse Senior Lecturer University of Kelaniya, Sri Lanka Tel : +94713102034, +9411 2914482 E-mail : chathura@kln.ac.lk	Ms. Pavithra Madhubhashini Senior Software Engineer Sysco LABS Sri Lanka Tel : +94702519163 E-mail : pavithramanchanayaka@gmail.com
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