

DILSHAN ABEYKOON

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Kandy, Central Province - 20000, Sri Lanka

OBJECTIVE

Machine Learning Engineer focused on delivering real-world impact with both traditional ML and Generative AI (LLMs/RAG). I design and deploy production-ready pipelines and full-stack AI systems across computer vision, NLP, and predictive analytics to solve measurable business problems.

SKILLS

- **Programming Languages:** Python, C++, JavaScript, TypeScript, SQL
- **Web Technologies:** React, Tailwind CSS, Vite, Django, Flask, FastAPI, HTML, CSS
- **Database Systems:** SQLite, MongoDB, Firebase
- **ML & GenAI:** TensorFlow, Keras, scikit-learn, XGBoost, NumPy, Pandas, OpenCV, Hugging Face, LangChain, LLMs/RAG
- **Cloud & DevOps:** AWS (EC2, S3), Azure, Heroku, Docker, Git, CI/CD, Linux
- **Testing & Automation:** Selenium, Postman
- **APIs:** REST API design, OpenAI API
- **Math/Stats:** Statistics, ANOVA, Chi-square, Hyperparameter Tuning
- **Other:** Streamlit, Ollama, Jupyter, Google Colab
- **Collaboration:** Jira, Slack, Confluence
- **Research:** Data Collection, Data Cleaning, Experimental Design, Model Evaluation, Reporting







EXPERIENCE

- **Broodbox.ai** Feb 2025 – Present
Junior Machine Learning Engineer Victoria, Australia
 - **Bee Harvest Estimation (YOLO, Fast R-CNN, Thermal Imaging)** — Designed an object detection pipeline for estimating bee harvest from thermal imagery; improved accuracy from 68% to 75% via data augmentation and hyperparameter tuning.
 - **ML Inference Services (FastAPI, Docker)** — Built scalable prediction APIs with optimized routing and response handling for high-throughput inference workloads.
 - **Employee Management System (Django, React, REST)** — Developed a secure backend with DRF and a responsive React frontend; integrated CORS and Axios-based data flows for reliable CRUD operations.
 - **Environmental Sound Detection (TensorFlow YAMNet)** — Implemented a binary classification pipeline with cross-validation and balanced dataset partitioning to support conservation monitoring.
- **Broodbox.ai** Aug 2024 – Feb 2025
Machine Learning Engineer — Intern Victoria, Australia
 - **Multiclass Audio Model (TensorFlow/Keras)** — Built a regularized model with augmentation (noise, pitch shift) and L2/dropout for better generalization; deployed via Flask on AWS for real-time predictions.
 - **News Intelligence (Selenium, LLMs, BERT)** — Scraped Australian women's sports news; classified content using OpenAI LLMs and performed sentiment analysis with a BERT pipeline.
- **Stemcore Asia Pvt Ltd** Jun 2024 – Dec 2024
Software Engineer Intern Sri Lanka
 - **Demand Forecasting (XGBoost, Dashboards)** — Developed forecasting models to improve inventory planning and built interactive dashboards for trend analysis and decision support.
- **Ruhunu Foods Pvt. Ltd** Mar 2022 – Apr 2024
Automation Intern Kandy, Sri Lanka
 - **IoT Humidity Control (Sensors, Microcontrollers)** — Automated humidity regulation in spice mills to maintain optimal drying/storage; improved product quality and shelf life while reducing manual monitoring.

EDUCATION

- **Coventry University** May 2024 – Jun 2025
BSc (Hons) in Computer Science with Artificial Intelligence United Kingdom
 - Final Grade: 77% — First Class Honours
- **National Institute of Business Management** Mar 2022 – Apr 2024
HND in Computer Science with Artificial Intelligence Sri Lanka
 - GPA: 3.63/4.00

PROJECTS

- **Agri Drone with Smart Fertilizer Detection** Jan 2024 – Apr 2024
Azure CV, Python, Drone Imaging 
 - Built drone-based crop monitoring to detect undernourished paddy areas and target fertilizer.
 - Trained and deployed a custom model on Azure Custom Vision.
 - **Impact: Increased crop yield by 12% and reduced fertilizer use by 18%.**
- **Secure Full-Stack Banking App** Oct 2023 – Dec 2023
Flask, SQLite, Python Cryptography 
 - Implemented authentication, symmetric/asymmetric encryption, and digital signatures.
 - Features include secure login, admin panel, balance view, and fund transfers.
 - **Impact: Strengthened data security in a simulated banking environment.**
- **EDA with LLaMA – Automated Exploratory Data Analysis** Aug 2023 – Sep 2023
Streamlit, Pandas, LLaMA 2, Ollama 
 - Automated CSV-based EDA with histograms, box plots, and correlation heatmaps.
 - Integrated LLaMA 2 for natural language insights and summaries.
 - **Impact: Reduced manual EDA time by 60%.**
- **Smart House Face Detection** May 2023 – Jul 2023
TensorFlow, OpenCV, NumPy, scikit-learn 
 - Fine-tuned a CNN for face detection in smart home surveillance images.
 - Evaluated with accuracy, confusion matrix, and classification reports.
 - **Impact: Enhanced surveillance reliability for smart homes.**
- **Soil Type Predictor** Feb 2023 – Apr 2023
TensorFlow, Keras, Flask 
 - Classified soil types (Black, Cinder, Laterite, Peat, Yellow) from images using a CNN.
 - Offered Google Colab training and Flask REST API for real-time inference.
 - **Impact: Achieved 90% accuracy, aiding agricultural planning.**
- **Heart Disease Prediction Model** Nov 2022 – Jan 2023
scikit-learn, XGBoost, Pandas, Flask 
 - Built a risk prediction model with feature scaling, cross-validation, and hyperparameter tuning.
 - Deployed a simple Flask app for clinician-friendly predictions.
 - **Impact: Delivered strong predictive performance to support early intervention.**

LEADERSHIP EXPERIENCE

- **Vice President**
Robotics Club, National Institute of Business Management (Kandy Innovation Center)
 - Led 30+ members in workshops and competitions on robotics and automation.
 - **Impact: Increased membership by 40% through outreach and events.**
- **Coordinator**
Skills Expo 2023, BMICH, Colombo
 - Managed logistics and event planning with a 50+ member volunteer team.
 - **Impact: Ensured smooth operations across multiple venues.**
- **Battle Bot Participant**
Robotics Club, NIBM (Kandy Innovation Center)
 - Designed and built competitive robot prototypes for regional competitions (SLT Campus).
 - **Impact: Gained hands-on experience in combat strategy and engineering.**

CERTIFICATIONS

- **Microsoft Power Platform Fundamentals** — Microsoft
- **Introduction to DevOps** — Coursera
- **Introduction to TensorFlow for AI, ML, and DL** — Coursera
- **Crash Course on Python** — Google (Coursera)

REFERENCES

1. **Mr. K. M. Madushan**

Consultant / Lecturer, National Institute of Business Management (NIBM)

Email: mahesh@nibm.lk | Phone: +94 11 732 1000

Relationship: Academic Advisor

2. **Prof. Roshan D. Yapa**

Professor in Statistics & Computer Science, University of Peradeniya

Email: roshany@pdn.ac.lk | Phone: +94 81 239 4254

Relationship: Thesis Supervisor