DINETH HETTIARACHCHI

AI/ML ENGINEER | IOT + DATA SOLUTIONS DEVELOPER | COMPUTER SCIENCE UNDERGRADUATE

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SUMMARY

Computer Science undergraduate at the University of Plymouth with hands-on experience delivering AI solutions for real-world clients and community needs. Skilled in Python, cloud platforms, and building full-stack applications. Eager to apply and expand my expertise in AI/ML in a collaborative, fast-paced environment.

PROJECTS

- **Smart Beehive Monitoring System -** (GitHub)
  - Built real-time **IoT system** with **Arduino** and CO_2 sensors, processed **~1,400** sensor readings/day for hive health monitoring; developed ML **anomaly detection** (Scikit-learn) and prototype alerting for beekeepers.
  - Developed ML models for **predictive analytics** and **anomaly detection** (Scikit-learn, Google Colab); delivered actionable insights for Sri Lankan beekeepers.
  - Exploring **acoustic-based AI detection** (queen/swarming/stress) and **Unified anomaly detection pipeline**, **TinyML edge deployment** for real-time alerts, and a secure, commercial-style dashboard.
- **Telco Customer Churn Prediction - Production MLOps Pipeline -** (GitHub)
  - Built an end-to-end **MLOps pipeline** for telco churn prediction with feature engineering (19→45), model training, **Airflow** orchestration, and containerized deployment via **Docker**.
  - Developed **Kafka** streaming inference (producer/consumer) with schema validation and checkpointing; achieved ~8 ms latency and high throughput.
  - Implemented **MLflow** experiment tracking and model registry (15+ versions); achieved **~97% test coverage** (226 tests).
  - Tuned a recall-optimized **GradientBoosting** model (**ROC-AUC 84.7%, Recall 80.8%**) and performed business **ROI analysis** (+$220 k / year).
- **Atiqlo Mobile Marketplace -** (GitHub)
  - Developed a full-stack mobile app enabling Sri Lankan artisans to sell handmade products, with secure payments, real-time chat, and inventory management.
  - Launched first digital storefront for local crafters, bridging traditional skills with modern e-commerce.
- **BookBridge – Used Book Marketplace Platform -** (GitHub)
  - Built a full-stack platform for trading used books with verified listings, real-time chat, and feedback systems (React, Node.js, MongoDB, Socket.IO).
  - Added user analytics and trust-based search to improve safety and user experience.
- **Air Quality Monitoring Dashboard -** (GitHub)
  - Developed a web platform for real-time Colombo AQI visualization using interactive maps, with automated data simulation and role-based access controls.
  - Built a simple chatbot for live AQI queries using **OpenAI GPT** API, applying prompt engineering for user interaction.
- **BudgetMe - Personal Finance Manager -** (GitHub)
  - Windows desktop app for personal finance management (C#, .NET, SQL Server LocalDB) with modules for transactions, debt tracking and investments.
  - Designed the SQL schema and implemented the ADO.NET data access layer and Windows Forms UI; includes dashboard visualizations and scripts to initialize the LocalDB.

PROFESSIONAL EXPERIENCE

Presentation Designer & Brand Strategist   Jan 2023 – Present (Freelance)

- Designed 100+ investor decks across 15 industries; maintained an average client feedback rating of 4.9/5.
- Translated complex data and research findings into clear, actionable insights for non-technical audiences.
- Built custom data dashboard visualizations for clients using **Python (Matplotlib, Seaborn)** and **PowerPoint**.

EDUCATION

University of Plymouth (United Kingdom)

B.Sc. (Hons) in Computer Science - Minor in Artificial Intelligence

Expected Graduation: Dec 2026

CERTIFICATIONS

- **Microsoft Certified:** Azure AI Engineer Associate, **Microsoft** ([Credentials](#))
- **Oracle Cloud Infrastructure Certified:** Foundations Associate, **Oracle** ([Credentials](#))
- **Oracle Cloud Infrastructure Certified:** AI Foundations Associate, **Oracle** ([Credentials](#))
- Google Data Analytics Professional Certificate, **Google**
- An Introduction to Programming the Internet of Things (IOT) Specialization, **UOC, Irvine**
- Machine Learning Specialization – **Andrew Ng**, **Coursera -** Expected Sep 2025

SKILLS & TOOLS

- **Languages:** English (Fluent), Sinhala (Native)
- **Programming:** Python, JavaScript (Node.js), C++, Angular (learning)
- **AI / ML:** Scikit-learn, TensorFlow, PyTorch, Pandas, NumPy, Hugging Face, OpenAI API, FAISS, NLP, Embeddings, Prompt Engineering
- **MLOps & Cloud:** Azure (Certified), AWS, Docker, Git, Airflow, MLflow, CI/CD, Jupyter, Google Colab
- Data & Visualization: Feature Engineering, Matplotlib, Data Preprocessing, REST APIs, Testing (unit/integration)
- Soft Skills: Problem-Solving, Teamwork, Strategic Thinking, Adaptability, Curiosity

REFERENCES

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