

THAMINDU GUNASINGHE

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📍 Kalutara, Sri Lanka



Profile

I am a **Transport and Logistics Engineering** undergraduate focused on applying **AI, Machine Learning, and Explainable AI** to real-world **supply-chain forecasting, procurement, and inventory-management** problems. My recent work includes a **Coconut Price Forecasting model at Nestlé** that achieved **over 95% forecasting accuracy**, supporting a high-impact procurement area where coconut-related spending is approximately **LKR 17B** within an estimated **LKR 60B procurement budget**. My final-year research is on **Explainable AI for Demand Forecasting and Inventory Management Systems**, combining forecasting accuracy with business interpretability for better supply-chain decision-making.

Experience

Nestlé Lanka PLC

Nov 2025 – Present

Supply Chain Intern

- Initiated and developed a **Coconut Price Forecasting** project to support procurement planning and budget visibility for a strategically important raw material.
- Built a machine-learning forecasting model achieving **over 95% forecasting accuracy** during evaluation, helping improve price visibility for coconut procurement decisions.
- Worked on a high-impact procurement area where Nestlé's overall procurement budget is approximately **LKR 60B**, with coconut-related spending contributing around **LKR 17B**.

WIWIS.AI

Nov 2024 – Oct 2025

Project Manager (Part-Time Contract)

- Managed delivery of AI-powered projects: **Mr. Wee** (AI WhatsApp sales assistant), **Bus Passenger Tracking & Revenue Assurance**, and **PrimeCare** healthcare logistics platform.
- Coordinated cross-functional teams by bridging transport/logistics expertise with AI/ML engineering workflows.
- Applied **prompt engineering and AI-assisted development** to speed up design, prototyping, and deployment.

Education

University of Moratuwa, Sri Lanka

Mar 2023 – Present

B.Sc. in Transport Management and Logistics Engineering (CGPA 3.55/4.00)

C.W.W. Kannangara Central College, Mathugama

2007 – 2020

Advanced Level in Physical Science (ABB) (Z-Score 1.6421)

Ordinary Level (4As, 4Bs, 1C)

Projects and Research

- Explainable AI for Demand Forecasting and Inventory Management System | XAI, ML, Forecasting**
Final-Year Research — *Supply Chain Analytics*
Research focused on building an interpretable demand-forecasting and inventory-management system that explains model outputs to support better planning and decision-making.
Aims to combine forecasting accuracy with explainability so supply-chain users can understand demand drivers, inventory risks, and recommended actions.
- Coconut Price Forecasting | Machine Learning, Supply Chain Forecasting**
Nestlé Lanka PLC — *Procurement / Supply Chain*
Initiated and developed a forecasting model for coconut price prediction, a crucial procurement input for Nestlé.
Achieved **over 95% forecasting accuracy** during evaluation, supporting better procurement budget planning for an estimated **LKR 17B** coconut spend.

- **Bus Passenger Tracking System | GPS, Data Analytics**
WIWIS.AI — *Transport / Logistics*
Project management and GPS-route data analytics for revenue assurance.
Route Planner Web App: supporting tool to feed route sections and fare details into the Bus Passenger project.
- **Sopaka.AI | Python, AI Automation**
Independent — *Supply Chain*
AI assistant for cleaning and standardizing supply-chain datasets.
- **Driver Drowsiness & Phone Use Detection | Computer Vision**
WIWIS.AI — *Transport Safety*
AI-based monitoring to improve driver alertness and road safety.
- **PrimeCare Logistics Platform | Web & Mobile Systems**
WIWIS.AI — *Healthcare Logistics*
Project management for healthcare sample delivery ecosystem.
- **Automated Storage & Retrieval System (ASRS) | Next.js, Arduino**
Independent — *Warehouse / Robotics*
Built the full **dashboard (Next.js)** and **microcontroller control (Arduino)** for ASRS prototype; enabled inventory tracking and pick/place workflow.
- **Intelligent Traffic Light System | CV & IoT**
University Project — *Urban Transport*
Research applying computer vision and AI for traffic-flow optimization.
- **Mr. Wee (RAG Prototype) | LLMs, RAG Pipelines**
WIWIS.AI — *Supply Chain / E-commerce*
Managed prototype for an AI-driven WhatsApp commerce assistant.

Awards and Scholarships

- **Dean's List — Semester 4**, University of Moratuwa
- **Winners — "Advantis All Around" Gamified Learning Challenge for Undergraduates**
Organized by the Department of TMLE in collaboration with Hayleys Advantis Limited

Certifications

Machine Learning Specialization — Coursera (DeepLearning.AI)

Skills

I collaborate effectively with AI and software engineers. Through **AI-assisted development and prompt engineering**, I apply the following technologies in real-world projects:

Languages:

English (Professional), Sinhala (Native)

Programming & Frameworks:

Python, PySpark, TensorFlow, FastAPI,
Scikit-Learn, OpenCV, ONNX, NextJS, C#

Foundations (from Degree):

Systems Engineering, Operations Engineering,
Operations Research, Supply Chain Engineering

Cloud & DevOps:

Azure Functions, Logic Apps, MongoDB, Runpod,
PGSQL, Google Cloud

ML & AI Tools:

OpenAI API, LLaMA, Qwen, RAG pipelines,
Prompt Engineering

MLOps:

Docker, Kubernetes

Engineering & Design:

FreeCAD, SUMO, AnyLogic Simulation, Canva, Photoshop

Volunteering and Leadership Experience

- **Batch Representative** *2023 – Present*
Transport and Logistics Engineering, University of Moratuwa
- **Member, CILT** *2024 – Present*
The Chartered Institute of Logistics and Transport
- **Deputy Head Prefect** *2019 – 2020*
C.W.W. Kannangara Central College
- **Navy Cadet** *2018 – 2020*
C.W.W. Kannangara Central College
- **Band Player** *2017 – 2020*
Brass Band, C.W.W. Kannangara Central College

References

Prof. Niles Perera

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