

# NAVAM OBEYSEKARA

## AI ENGINEER

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### SUMMARY

AI & Data Science Professional with a proven track record of developing end-to-end machine learning solutions, from custom YOLOv8 computer vision pipelines to Agentic AI frameworks for industrial automation. Demonstrated technical leadership in managing cross-functional teams and building high-fidelity synthetic datasets to solve complex data privacy challenges. Expert in leveraging LLMs, RAG, and Power Platform to transform raw organizational data into strategic business intelligence and automated enterprise workflows.

### PROFESSIONAL EXPERIENCE

#### Contractor - Artificial Intelligence and Data Science

Sep 2025 - Apr 2026

Deloitte Sri Lanka

- Developed an Agentic AI platform to automate the classification of industrial equipment quotes, utilizing LLMs to categorize items via predefined rules and autonomous web-research while providing probability scores for human-in-the-loop verification.
- Designed a synthetic data framework using Sri Lankan census distributions to simulate realistic banking populations, enabling high-fidelity model training while bypassing privacy constraints of confidential datasets.
- Engineered an automated internal document verification system using Power Automate, integrating custom forms and multi-stage approval workflows that perform rigorous data validation to ensure dataset integrity before secure archival.
- Constructed a compliance-focused Beneficiary Ownership verification flow in Power Automate that automates shareholder document tracking, verifies data validity within submissions, and manages recurring reminders to ensure regulatory adherence.
- Optimized and managed an integrated client management system by enhancing a Power Apps interface for streamlined data entry, utilizing SharePoint for centralized storage and a Power BI dashboard for real-time visualization of client metrics.

#### Intern - Artificial Intelligence and Data Science

Sep 2024 - Sep 2025

Deloitte Sri Lanka

- Engineered an end-to-end P&ID (Piping and Instrumentation Diagram) analysis pipeline by training a custom YOLOv8 object detection model to identify diverse industrial components and integrating OCR for the concurrent extraction of textual metadata to digitize complex technical schematics.
- Assisted in the development of a Retrieval-Augmented Generation (RAG) based LLM chatbot specifically engineered for Cybersecurity data classification, utilizing semantic context and vector-based retrieval to categorize security logs.
- Developed a Power BI travel dashboard using behavioral modeling to flag irregular transport usage and optimize corporate budgets.
- Assisted in developing a Power BI analytics framework to monitor progress across mandatory internal training programs to view of how effectively employees are meeting their learning requirements.
- Constructed an automated data collection frameworks using Beautiful Soup to aggregate high-volume datasets from diverse web sources.

## PROJECTS

### Hallucination Detection and Mitigation in Sinhala-to-English Neural Machine Translation

- Conducted a systematic review and developed detection strategies for hallucinations in Neural Machine Translation, specifically targeting the Sinhala-to-English language pair. By implementing sequence log-probability analysis and mitigation techniques for low-resource translation tasks, this research evaluated various methodologies to improve the factual reliability and safety of outputs generated by Large Language Models.

### FishFit (Team Leader)

- Led a cross-functional development team to build an AI-driven fish health monitoring application utilizing YOLOv8 for real-time object tracking and TensorFlow/Keras to identify behavioral anomalies. This involved managing the full development lifecycle, from training custom computer vision models to final system integration, providing a non-invasive solution for automated aquatic livestock assessment.

## EDUCATION

### Bachelor's Degree in Artificial Intelligence and Data Science (Reading)

Sep 2022 - May 2026

Informatics Institute of Technology (IIT), affiliated with Robert Gordon University

### G.C.E Ordinary Level

Feb 2021

Lyceum International School, Nugegoda: 9As

## TECHNICAL SKILLS

### Programming Languages

Python  
R  
Java  
SQL  
Javascript

### Applications

Power BI  
Power Automate and Power Apps  
AWS  
n8n  
Docker

### Libraries and Frameworks

Pytorch, TensorFlow  
LangChain, RAG  
Numpy, Pandas  
OpenCV, YOLOv8  
BeautifulSoup

## EXTRA-CURRICULAR ACTIVITIES

- Member of the Rotaract Club, IIT
- Member of OGV team in AIESEC in IIT
- 2nd Runner Up in Inter-International School's U-13 Doubles Badminton Tournament
- Participated in Cutting Edge 2024 Annual Exhibition (FishFit Project)
- Past member of the Nature and General Knowledge Club in Lyceum International School, Nugegoda

## REFERENCES

Mr. Darshan Gunawardena  
Director - Technology and Transformation | EAID  
Deloitte Colombo,  
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