

Anojan Yogenthiran

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SKILLS

Languages: Python, SQL, TypeScript, C++, Java, MATLAB

AI/ML: LLM Fine-tuning (LoRA, QLoRA), RAG, Agents, Prompt Engineering, Transformers, CNN, XAI, Statistical Modeling

Libraries: NumPy, Pandas, Matplotlib, Scikit-learn, PyTorch, TensorFlow, Hugging Face, OpenAI API, NLTK, Dask, PySpark

Frameworks/Tools: FastAPI, Docker, Kubernetes, MLflow, Azure, LangChain, LangGraph, Supabase, AWS, GCP, Git, Cursor

WORK EXPERIENCE

Transpots

May 2025 – Present

AI Engineer

Toronto, Ontario

- Reduced trucking-invoice processing time **60%** by architecting a **LangGraph/LangChain GPT-4 RAG agent** with retrieval, tool-calling, and validation nodes.
- Increased data-consistency pass rate to **>95%** by building **GPT-4** invoice-validation pipelines that detect tampering and cross-check shipment data.
- Designed **rule-based + Human-in-the-Loop (HITL)** nodes for high-risk cases, reducing false approvals by **40%**.
- Building a **FastAPI** service layer to expose the agentic workflow as an internal API product.
- Led project execution and collaborated with **engineers + stakeholders** to align AI system design with business goals.

Kaidu.ai

Jan 2025 – Apr 2025

Data Science and Engineering Intern

Toronto, Ontario

- Achieved **89%** device mobility-classification accuracy by applying **DBSCAN + Dynamic Time Warping (DTW)** to RSSI signals.
- Reduced false positives **6× (12% to 2%)** by integrating a dynamic Fourier smoothing filter into preprocessing pipeline.
- Used **MLflow** to track experiments and optimize hyperparameters, selecting the best-performing model.
- Delivered an end-to-end ML pipeline on **Azure** for real-time motion classification, improving IoT responsiveness by **30%**.

Intelligence Data Science Lab

Apr 2024 – Dec 2024

Research Associate, Western University

London, Ontario

- Fine-tuned a DeepSELEX-inspired **CNN** with **PyTorch** on large-scale SELEX datasets, improving DNA-binding sequence classification accuracy by **20%**.
- Enhanced miRNA-target gene prediction by fine-tuning **LLaMA 3.1** and **Mistral-7B** models for biological sequence representation.
- Automated HT-SELEX DNA workflows with **Airflow + Kafka**, enabling scalable modular pipelines.
- Explored **VAEs & LLMs** to model sequence distributions, generating novel DNA candidates from early-stage SELEX rounds.

HeHealth

Oct 2022 – Oct 2023

Associate AI/ML Engineer

Remote, Singapore

- Optimized **ResNet & VGG16** CNN models on proprietary medical imaging data, achieving **96%** classification accuracy for STD detection; deployed models using AWS SageMaker.
- Implemented CI/CD pipelines with **GitHub Actions + SageMaker**, enabling continuous retraining to reduce model drift.
- Augmented dataset by **40%** using **SinGAN** and **ConSinGAN** to synthetically generate minority-class STD images, improving model robustness and generalization on underrepresented conditions.
- Integrated **Grad-CAM** visualizations into clinical dashboards, enhancing diagnostic interpretability and clinician trust.

SenzMate AIoT Intelligence

Dec 2021 – Sep 2022

Associate ML Engineer

Colombo, Sri Lanka

- Deployed an **LSTM**-based anomaly detector on IoT edge devices with **TensorFlow & Flask API**, achieving **90%** detection accuracy and cutting false alerts by **10%**.
- Built scalable ETL pipelines with **PySpark + Dask** to clean **15M+** insurance claims, improving data consistency.
- Improved prediction accuracy **15%** by normalizing claim text with **NLTK** tokenization, stemming, and regex.

PROJECTS

Policy Pilot — AI Document Assistant | [GitHub](#)

Aug 2025

- Built an AI assistant for querying large documents with **FAISS + AWS Lambda microservices**, reducing manual research time by **70%**.
- Delivered citation-backed answers with hybrid retrieval, minimizing hallucinations in document queries.

EDUCATION

Western University

London, Ontario

M.Sc. in Computer Science, Specialization in Artificial Intelligence; GPA: 3.9/4.0

Sep 2023 – Dec 2024

- Research topic:** Generative AI-Driven Aptamer Discovery for Accelerated Drug Development
- Relevant Courses:** Theoretical Machine Learning, Advanced AI, Reinforcement Learning, Advanced Databases

Sri Lanka Institute of Information Technology

Colombo, Sri Lanka

B.Sc.(Honours) in Electrical and Electronic Engineering

Jan 2018 – Dec 2021