Naomi Nour

AI/ML Engineer

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Summary

AL/ML Engineer with a Master's in Artificial Intelligence and **2+ years** of experience in developing AI-driven solutions alongside **5+ years** of experience **in tech and software development**, specialising in **machine learning model lifecycle, fine-tuning LLMs,** and **deep learning.** Skilled in **Python, PyTorch, TensorFlow,** and **MLOps** practices such as **CI/CD** and **containerisation** to build scalable AI solutions.

Work Experience

Machine Learning Engineer   *Dec 2023 – Present*
Digital Readiness and Intelligent Systems Ltd. (D-Ready)

- Developed and deployed an **AI-powered chatbot platform**, integrating **LLMs** with **Python, Flask, REST APIs, and LangChain**, enhancing decision-making capabilities.
- **Processed and analysed 2,000+ images** using **Computer Vision with NLP**, providing actionable recommendations to improve outcomes and user interaction.
- Implemented a **Machine Learning Model** using **Gradient boosting** for lung cancer detection, achieving **95% accuracy** through advanced **preprocessing**, **feature engineering**, and **model optimisation**, while addressing model bias for a research study.

AI Research Assistant   *Jun 2023 – Nov 2023*
Teesside University

- Collaborated with a cross-functional team to develop an **AI Risk Management** system leveraging **LLM APIs** and **prompt engineering**, successfully engaging **20+ SMEs** for adoption.
- Designed an **adversarial learning system architecture** to combat **AI cyberattacks** on supply chains, showcasing problem-solving abilities and critical thinking in a research-driven.
- Co-authored an **IEEE-published paper:**
  "An Explainable AI Tool for Operational Risks Evaluation of AI Systems for SMEs."   *Link*

Founder   *Apr 2018 – Jan 2023*
Manolight (E-Commerce Gift Shop)

- Launched and scaled an e-commerce business from 1 to 7 employees, achieving 63K+ social media followers through strategic analysis, A/B Testing and digital marketing.
- Implemented an **NLP-based sentiment analysis model** for **3K+ customer feedback**, driving customer engagement strategies and sparking a passion for AI.

Junior Software Developer   *Nov 2015 – Mar 2018*
ICT Organisation

- Improved user experience through WordPress websites (PHP, JavaScript) and Android apps (Java), optimising event registration workflows and digital solutions.

Selected Projects

Fine-Tuning Large Language Models for Specialised Applications   *LLaMA GitHub - GPT GitHub*

- **Fine-tuned GPT** and **LLaMA** medical terminology models achieved 9.6% improved comprehension using **PyTorch** and **Transformers** through advanced **optimisation techniques**.

- Developed scalable **fine-tuning** workflows for **20,000+ medical data**, implementing **CI/CD (GitHub Actions)** for automated integration and utilising **MLflow** and **HPC** environments to ensure reproducibility.

Text Summarisation *Link*

- Developed and deployed a scalable text summarisation pipeline for **16,000+ data** samples on **Azure Cloud** using **FastAPI** and **Flask** for real-time processing, ensuring efficient data ingestion, validation, and transformations within robust **data pipelines**.
- Automated deployment workflows with **CI/CD (GitHub Actions)** and **Docker**, implementing **MLOps** best practices to ensure model consistency and traceability.

RAG-Powered Financial Planning Assistant *Link*

- Developed a QA system leveraging **Retrieval-Augmented Generation (RAG), LLMs, FAISS (vector database), LangChain,** and advanced **NLP pipelines** for financial planning assistance.

Education

MSc Artificial Intelligence with Advanced Practice | *Teesside University* | *Jan 2025*

- *Grade: **Distinction***
- *Paper Under Review: Fine-Tuning LLMs for Medical Applications*

BEng Computer Engineering | *BNUT University*

Certificates

Deep Learning Specialisation

Apr 2024 | Deeplearning.AI

Python Specialisation

Sep 2023 | UMich | Coursera

Azure AI-900

Aug 2024 | Microsoft

Skills and Tools

Machine Learning & AI:

- Generative AI (LLMs, Text Generation, Fine-Tuning GPT, LLaMA Models)
- NLP (Transformers, Large Language Models, Prompt Engineering)
- Deep Learning (CNN, RNN, LSTM, GRU, GANs)
- Computer Vision (Object Detection, Image Segmentation, etc.)

Programming & Frameworks: Python, SQL, Flask, REST APIs, PyTorch, TensorFlow, Scikit-learn

Model Deployment & MLOps: CI/CD (GitHub Actions), Model Versioning, Containerization (Docker), Model Tracking (MLflow), Cloud Deployment (Azure AI Studio, App Services, Blob Storage)

Data Visualisation & Analytics: Power BI, Matplotlib, Predictive Analytics, Data Cleaning