

AMINE EL IDRISSE

EDUCATION

MSc Artificial Intelligence | THE UNIVERSITY OF MANCHESTERSept 2025 – Sept 2026

- Modules: Machine Learning, Deep Learning, Knowledge-Based AI, Data Engineering, Computer Vision.

BSc (Hons) Computer Science | THE UNIVERSITY OF MANCHESTERSept 2022 – Jun 2025

- Relevant modules: Algorithms & Data Structures, NLP, Data Science, Software Engineering, Databases, Operating Systems.

EXPERIENCE

AI Engineer Intern | FRESHTRACKJun 2025 – Aug 2025

- Fine-tuned an LLM to extract structured data from unstructured carrier documents (PDFs, emails), cutting manual data entry time by ~40% for a logistics operator base of 1,600+ users.
- Built a RAG pipeline enabling operators to query carrier contracts, logistics rules, and route history in natural language, reducing information lookup time from minutes to seconds.
- Integrated OpenAI API to power a natural language query interface over live shipment dashboards, enabling non-technical ops staff to retrieve route status and carrier performance data without SQL, cutting reporting time by 35%.

AI Engineer Intern | THE UNIVERSITY OF MANCHESTERJun 2024 – Aug 2024

- Developed LLAMA Gym CLI, an open-source tool for managing and comparing llama2/llama3 models (7B, 8B, Instruct), streamlining LLM benchmarking.
- Leveraged Docker, Azure cloud deployment, and API development to containerise and deploy the tool.

Software Engineering Intern | PRATISOFTJun 2023 – Aug 2023

- Coordinated with an agile team of 8 to develop a healthcare application, ensuring 100% regulatory compliance and increasing user satisfaction by 25%.
- Improved code quality through 200+ tests and debugging sessions, reducing software bugs by 30%.

PROJECTS

LLM Multi-Agent Trading System (MSc Dissertation)Jul 2026 – Sep 2026

- Built an LLM agent backtesting framework in Python to ablate three agentic AI architectures (single-agent, memory-augmented, multi-agent with risk control) on a fixed Llama 4 backbone.
- Engineered a leakage-safe data pipeline (prices, Finnhub news via REST APIs) and reproducible experiment tooling (SQLite-cached LLM calls, JSONL logs, YAML configs) for 18 backtests.
- Evaluated on Sharpe, max drawdown, volatility, turnover with bootstrap confidence intervals; memory and risk control cut max drawdown by ~35% and turnover by up to 62%.
- Implemented Python, pandas, NumPy, Matplotlib, SQLite, REST APIs, Llama 4, Git.

Retrieval-Augmented Generation (RAG) QA SystemFeb 2026 – Apr 2026

- Engineered an end-to-end RAG pipeline for domain-specific QA, covering document ingestion, retrieval, generation, and evaluation.
- Built inference and evaluation workflows with Qwen2.5-0.5B-Instruct, enabling systematic benchmarking and response quality improvements.
- Implemented Python, LLMs, Embeddings, Vector Store, Information Retrieval and Prompt Engineering.

Knowledge Graph Link Prediction PipelineSept 2024 – Mar 2025

- Built an end-to-end PyTorch Geometric pipeline for six KG embedding models, packaged in Docker with GitHub Actions CI/CD.
- Automated hyper-parameter optimisation with Optuna, migrated R-GCN to sparse CUDA kernels, halving training time and lifting ROC-AUC to 0.97.
- Implemented Python, PyTorch Geometric, Docker, GitHub Actions and Optuna.

LLM Fine-tuning for Natural Language UnderstandingApr 2025

- Fine-tuned BERT-base (110M params) for three sequence-classification tracks (NLI, Evidence Detection, Authorship Verification), achieving micro-F1 of 0.89.
- Engineered an MLOps pipeline: mixed-precision training, stratified k-fold CV, experiment tracking, and containerised inference with Docker.

Automatic Number Plate Recognition SystemAug 2024

- Implemented an ANPR system using CNNs, achieving 95% accuracy in license plate recognition under diverse conditions.
- Applied image preprocessing techniques to overcome quality and environmental challenges, maintaining robust real-world performance.
- Implemented Python, OpenCV and CNNs.

LEADERSHIP

President | NORTH AFRICAN SOCIETY, MANCHESTER

- Led the largest North African society in Manchester (900+ members, 15 committee members) and organised cultural events with 100+ attendees by collaborating with societies across the UK.

Participant | ENACTUS NATIONAL COMPETITION, CASABLANCA

- Conceptualised Infinityheat, an eco-friendly heating solution for 3 million rural Moroccans; secured 2nd place in a national social entrepreneurship competition with 200+ participants.

SKILLS

- ML/AI: PyTorch, TensorFlow & Scikit-learn
 - NLP/CV: HuggingFace, NLTK & OpenCV
 - Tools: Docker, Git, GitHub Actions & Linux
- Languages: Python, Java, C++, JavaScript & SQL
 - Web: Django, Node.js, React & Angular
 - Database/Cloud: MySQL, MongoDB & Azure