Ahmed Karim

Linkedin: https://www.linkedin.com/in/ahmed-karim-ak/
Github: github.com/AhmedTechOfficial

Email: ahmed022001@hotmail.com
Mobile: +44 777 8889 148

EDUCATION

- **MSc (150 Credits) Artificial Intelligence** — Sep 2023 - Dec 2024
  King's College London — *UK, London*
  Project: Uncertainty Quantification in Automated Essay Scoring using LLMs (Merit)

- **BSc(Hons) Computer Science (First Class)** — Sep 2020 - June 2023
  Queen Mary University of London — *UK, London*
  Project: Model based Reinforcement learning curiosity driven exploration (First)

EXPERIENCE

- **LSEG Machine Learning Engineer | Markets Engineering Graduate**
  London Stock Exchange (Full-time) — *Sep 2024 - Ongoing*
  - **Advanced Data Analytics**: ADA team within LSEG focused on driving innovation in the financial markets through advanced engineering solutions.
  - **MLOps**: Applied machine learning for operational efficiency, including model deployment, monitoring, and automated retraining to improve lifecycle management in financial markets.
  - **ARIMAP Algorithm Development**: Developed ARIMAP, a proprietary algorithm integrating ARIMA and Prophet models for enhanced time series forecasting on Control M data. ARIMAP outperforms traditional models in specific contexts; publication in progress to document and share results.
  - **Enigma – Internal Chatbot for Data Accessibility**: Contributed to Enigma, an internal chatbot using Retrieval-Augmented Generation (RAG) and Amazon SageMaker for LLM evaluation, designed to improve employee access to internal data through natural language queries.
  - **Self-Healing Machine Learning**: Implementing a self-healing ML system using StackStorm and Control M, enabling automated anomaly detection and corrective actions in real-time, enhancing operational resilience.

- **London Stock Exchange Technology Intern | DevOps Engineer**
  London Stock Exchange (Full-time) — *Jun 2023 - Aug 2023*
  - **Cloud Migration**: Utilized cutting-edge technologies such as Helm, Terraform, and Kubernetes to streamline cloud migration processes. Collateral Management System applications were migrated to the cloud.
  - **AWS**: Demonstrated commitment to professional development by participating in an AWS training day focused on large language models, acquiring skills relevant to modern cloud computing.

- **ICL Undergraduate Researcher (UROP) | Machine Learning for Wildfires**
  Imperial College London (Full-time) — *Jul 2022 - Oct 2022*
  - **Leverhulme Centre for Wildfires Environment and Society (LCWES)**: Received £2500 in funding. Supervised by Dr Ramesh Ningthoujam (Department of Life Sciences) and Dr Sibo Cheng (Department of Computing).
  - **Quantum GIS Software**: Analysing data-sets obtained by satellites such as MODIS. Global Fire Atlas dataset and Forest Fragment dataset is used to study the relationship between forest fragments and burnt areas.
  - **Machine Learning**: CNNs, ANNs and Random Forest machine learning algorithms employed to inspect impact of forest fragmentation on fire propagation/fire duration.
  - **Results/Output**: The output was useful in understanding how wildfires affect fragmentation process and vice-versa at landscape level, developing fire regime definition for the tropics in the LCWES

PERSONAL PROJECTS AND SKILLS

- **Python (PyTorch) - Deep Learning**: Wrote a script to classify different types of Pokemon using a dataset from Kaggle, programmed and trained a handwritten digit classification CNN model with MNIST Dataset.
- **Java (OOP)**: Coded a Text-Based Adventure whilst implementing Object Oriented Programming techniques.
- **Model Based RL and Curiosity Driven Exploration**: Project that explores the potential benefits of combining Model Based RL with curiosity techniques and apply it to various environments such as Mario and Atari.
- **Technical Skills**: Intermediate in Python,Java; Learner in RL/DL with PyTorch and OpenAI Gym. Familiar with Numpy, Pandas, HTML, CSS, Git, GitHub, Anaconda, QGIS. Interested in Deep Reinforcement Learning, Computer Vision, Game AI, GANs and Machine Learning, Docker.

ACTIVITIES/LEADERSHIP

- **YouTube Channel**: Created Tutorial on Insertion Sort Algorithm and plan to make teaching videos on Deep Learning and Reinforcement Learning.
- **Campaigns and Events Manager:** ABSOC at QMUL - Organised events and campaigns.
- **Volunteer:** Al Ayn Charity sponsors Iraqi orphans. General Volunteer helping assemble charity boxes to be distrubuted.
- **Other Interests:** Research, General Artificial Intelligence, Robotics, Applying AI to Physics, MineRL, Economics and Finance.