Abdul Karim Abbas

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Education

University of Leeds   Sep 2021 - Present
*BSc, MEng Computer Science with Artificial Intelligence (**Expected 2:1**)*

- Awarded the International Undergraduate Scholarship in every academic year

Al-Faris International School, Riyadh   Sep 2019 – Jun 2021
*International Baccalaureate (IB) Diploma (**37 Points**)*

Professional experience

PwC Middle East   Jun - Aug 2023
Technology Consulting Internship, Foundation for the Future

- Developed an automation solution to streamline invoicing processing between partners and vendors
- Utilised Google AppsScript and Google Sheets to handle processing for large data
- Deployed the project via a web app portal built with HTML, CSS, and JavaScript

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Relevant university coursework

Third Year Individual Project – Achieved 73%
Enhancing University Learning with Retrieval-Augmented Generation and GPT-3.5 Fine-Tuning

- Enhanced GPT-3.5 with Retrieval-Augmented Generation for targeted academic support
- Explored supervised fine-tuning for increased contextual alignment to complex queries
- Conducted user evaluations in an educational setting, demonstrating enhanced accuracy

Machine Learning Coursework – Achieved 81%
Predicting cancer mortality rates in US counties

- Designed a concise pre-processing pipeline addressing missing values and standardisation
- Implemented linear regression models for target value prediction
- Evaluated and validated model performance using Cross-Validated Mean Squared Error

Intelligent Systems and Robotics Coursework – Achieved 85%
Implementing advanced techniques with ROS and OpenCV

- Developed object detection algorithms using dynamic HSV colour masking
- Implemented image stitching using SIFT and BFMatcher to align and combine images
- Utilised grayscale conversion, edge detection, dilation, and Hough Circles for enhanced feature analysis

Spotify Song Recommendation - Personal Project
Personalised recommendations using vector cosine similarity

- Performed data pre-processing on a large dataset, including cleaning and standardising audio features
- Implemented a content-based filtering algorithm with cosine similarity
- Integrated with Spotify API to seamlessly fetch and update user playlist data in real-time

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Skills

Python, C/C++ • *NumPy, scikit-learn, Pandas, Matplotlib, Seaborn* • *MySQL, SQLite3* • *Git, GitHub*