Muhammad Taha

+60 18 7818572 • Personal Website • Email • LinkedIn • Github • Kaggle

SKILLS: Python, Java, SQL, C++, Tensorflow, Keras, Hugging Face Transformers, Numpy, Pandas, R, Photoshop, Lightroom, Word

INTERESTS: Deep Learning, Machine learning, Artificial intelligence, Computer Vision, Natural Language Processing, Technology, Astro Physics, Podcasts, Football, Badminton, Table tennis.

LANGUAGES: English, Urdu, Hindi.

EDUCATION:

The University of Southampton, Malaysia — *Bachelor of Computer Science: OCT 2022 - June 2025 (Expected Graduation)*

- Exceptional Achiever Scholarship
- Year 1 GPA **3.69**

Nixor College, Karachi — *A Levels:* 2A* 2A, **Dean's List**

The City School, Hyderabad — *O'Levels:* 8 A/A*

EXPERIENCE:

Machine Learning Intern @ TDCX *JUNE 2023 - SEPTEMBER 2023*

- **Collaboration & Integration:** Worked with machine learning teams to seamlessly integrate a suite of cutting-edge language learning models, including but not limited to VertexAI/Palm2 and OpenAI's GPT-3.5.
- **Platform Expertise:** I extensively used the Vertex AI platform for efficient integration with Palm, demonstrating adaptability and proficiency in harnessing the potential of cloud AI platforms.
- **Database Management:** Successfully integrated LLMs with PostgreSQL, leveraging its pgvector extension and *Google Cloud Platform*. Experienced in using vector databases such as Quadrant to optimize data retrieval and storage processes.
- **RAG Systems:** I worked extensively on retrieval-augmented generation (RAG) systems, pushing the boundaries of model capabilities by combining the best retrieval and generation mechanisms for optimal output.
- **Model Training & Deployment:** Played a pivotal role in harnessing the Langchain and Llama Index for efficient training and deployment of LLMs, ensuring optimized performance and scalability.
- **Technology Acumen:** Consistently stayed abreast of the latest AI/ML trends, tools, and technologies, reinforcing a commitment to continuous learning and professional growth.
- **API Integration:** Demonstrated expertise in working with a myriad of advanced APIs, including GPT-3.5 and Whisper, which was instrumental in ensuring seamless interplay between different tools and platforms.
- **Programming Skills:** Enhanced and honed my Python coding capabilities, adopting best practices and leveraging them for efficient integration, modelling, and analytics.

Kaggle Expert *PRESENT*

- Published open-source work on license plate detection, transfer learning, and a movie recommendation system. Additionally, I am an active member of the Kaggle community.
- Developed strong problem-solving skills, including identifying relevant data sources, formulating hypotheses, and testing and evaluating models.

President, *Computer Science Student Association* *PRESENT*

- I work closely with the committee to drive our club's ambitious initiatives. Our vision includes organising workshops, hackathons and other engaging activities that promote learning and networking opportunities for students in Computer Science.

Teacher Assistant, *Nixor College* *AUG 2020 - JULY 2021*

- Taught my fellow peers computer science and physics in A-levels.

PROJECTS

J.A.R.V.I.S - Voice-Interactive AI Assistant

- "Jarvis," a voice-interactive AI assistant using **OpenAI's GPT-3.5 Turbo** and **Whisper AI** for accurate voice transcription. Utilized the **'Bark'** Text-to-Speech model for natural vocalization, enabling seamless, context-aware interactions. This project represents an advanced integration of AI technologies for innovative, hands-free communication.

Face Detection

- Developed a custom face detection system using YOLOv5, with data annotated through ROBOFLOW. Enhanced model performance using transfer learning and hyperparameter optimization, achieving a 0.99 f1 score.

Chatbot

- Created a domain-specific chatbot using the Roberta model from Hugging Face, leveraging its transformer architecture. Fine-tuned on tasks like customer support and integrated with Anvil for a Python-based web interface.

Rant Translator

- Developed a "Rant Translator" application using OpenAI's Davinci Model and Streamlit, featuring a user-friendly interface for transforming rants into diplomatic language. This tool assists users in communicating more tactfully.

CERTIFICATIONS:

- Data Science and Machine Learning by **MIT** Schwarzman College of Computing
- Machine Learning and Its Applications - **National University of Singapore**
- **Kaggle** Deep learning, Machine Learning, Python