

MUHAMMAD TAHA

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LINKS

- www.linkedin.com/in/mtaha21/
- www.github.com/taham655
- www.kaggle.com/gfxtaha

SKILLS

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

WORK HISTORY

06/2023 to 09/2023 **Machine Learning Intern**

TDCX

- **Collaboration & Integration:** Partnered with machine learning team (R&D) to seamlessly integrate a suite of cutting-edge Language Learning Models, including but not limited to VertexAI/Palm2, OpenAI's GPT-3.5, and Llama2
- **Platform Expertise:** Extensively used 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:** 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, modeling, and analytics

12/2021 to Current

Kaggle Expert

Kaggle – remote

- 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.

10/2023 to Current

President

Computer Science Student Club – Johor bahru, Malaysia

As President of the Computer Science Student Club, I led a diverse team of 15 members, orchestrating the planning and execution of various technical and social events, including monthly workshops and much more.

EDUCATION

Bachelor of Computer Science

The University of Southampton, Malaysia - Malaysia

A Levels

Nixor College - Karachi

O'Levels

The City School - Hyderabad

CERTIFICATIONS

- Data Science and Machine Learning by MIT Schwarzman College of Computing
- Machine Learning and Its Applications - National University of Singapore
- Python Complete Bootcamp (Udemy)
- Ultimate HTML5 & CSS Series (Mosh)
- Kaggle Deep learning, Machine Learning, Python

LANGUAGES

English:

Urdu:

Hindi:

HOBBIES AND INTERESTS

- Deep Learning
- Machine learning

- Artificial intelligence
 - Computer Vision
 - Natural Language Processing
 - Technology
 - Astro Physics
 - Podcasts
 - Football
 - Badminton
 - Table tennis
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PROJECTS

Jarvis - Voice-Interactive AI Assistant, Developed "Jarvis," a dynamic voice-interactive AI system leveraging OpenAI's GPT-3.5 Turbo. Upon receiving voice commands, Jarvis transcribes them with pinpoint accuracy using Whisper AI. These transcriptions are processed by GPT-3.5 Turbo to generate context-aware responses. Finally, the 'Bark' Text-to-Speech model vocalizes these responses, facilitating natural and continuous user interactions. This project embodies the fusion of cutting-edge AI models, offering an innovative solution for hands-free, voice-driven communication.

Transcription App, As part of a course requirement involving extensive interviews, I developed the 'Transcription App', leveraging Whisper AI and Distill Whisper technology to address the need for efficient audio transcription. This project, born out of the necessity to manage large volumes of interview data, was successfully integrated and hosted on Hugging Face Spaces, offering seamless access to my classmates. The app not only streamlined the transcription process but also significantly enhanced collaborative efficiency and data accuracy, demonstrating my initiative in creating practical, tech-driven solutions to real-world challenges.

Face Detection, Face detection using YOLOv5 on custom data. Annotated the data using ROBOFLOW, and trained the YOLOv5 model on the annotated dataset using transfer learning techniques. Optimized the model performance by adjusting hyperparameters such as learning rate, batch size, and the number of training epochs and managed to get a 0.99 f1 score.

Chatbot, Developed a chatbot using the Roberta model on Hugging Face, a state-of-the-art language model based on transformer architecture. Fine-tuned the pre-trained Roberta model on a specific domain or task, such as customer support or conversational AI. Integrated the chatbot model with Anvil, a platform for building web apps with Python, to create a web-based interface for the chatbot.

Rant Translator, Developed a Rant Translator application using OpenAI's Davinci Model API Key and Streamlit. Designed a user-friendly interface for the application on Streamlit, allowing users to input their rants and receive translated versions easily. Helped users avoid saying things they might regret by translating their rants

into a more diplomatic and tactful language.

License Plate Recognition, Developed a license plate detection system using OpenCV and EasyOCR, capable of accurately detecting and reading license plates from images. Utilized various image processing techniques, such as Edge detection, noise reduction, and contour detection, to isolate and extract license plates from complex backgrounds.

VOLUNTEER EXPERIENCE

Organized a Book drive for a library for the underprivileged children in a village called 'Tando Allahyar'. We managed to gather over 1500 books.