Hanan Alqahtani

Artificial Intelligence Engineer

0507835300
alqhtanihanan@outlook.com
Al Khobar (open to relocation)

Objective

Eager to leverage my expertise in machine learning and deep learning to solve complex challenges. With a background in developing AI models, I am ready to contribute to cutting-edge projects that enhance product capabilities and deliver tangible business value. Committed to continuous learning and collaboration, I am seeking a dynamic environment where I can utilize my skills to advance AI applications and drive technological advancements.

Education

Master of Science in Artificial Intelligence | University of Tabuk, Tabuk, SA (2024)

English for Academic Studies | Georgetown University, Washington D.C, US (2020)

Bachelor of Science in Computer Science | University of Tabuk, Tabuk, SA (2018)

Experience

Deep Learning Co-op at Air Products Technology Center | Dhahran, Jun 2024 – Present

- Design industrial tools to ensure reliable and consistent monitoring of Jazan IGCC plant operations.
- Implement TinyML algorithms on a Raspberry Pi device for real-time object detection and audio classification.
- Test I2S microphone on Raspberry Pi and develop spectrogram visualizations for analysing real-time audio data.
- Troubleshoot installation and setup issues for tools and algorithms, ensuring proper configuration and functionality.
- Prepare documentation.

ICT Teacher at Tabuk International School | Tabuk, September 2022 – Jun 2024

- Transformed traditional classes into 100% practical sessions, enabling students to engage exclusively in laboratory-based training for immediate application of concepts.
- Established fully equipped robotics labs containing Arduino kits and educational robots to enhance hands-on learning.
- Developed the curriculum to incorporate Python as the fundamental programming language, ensuring modern technological competencies.

Internal Training at Ministry of Water | Tabuk, September 2017

- Managed client data entry and updated billing records.
- Assisted in enhancing data management systems.

Skills

- **Programming Languages:** Python, Familiarity with C.
- **Machine Learning:** TensorFlow, TensorFlow Lite, Keras, and Scikit-learn.
- **Deep Learning:** PyTorch, implementing CNNs and RNNs.
- **Natural Language Processing (NLP).**
- **Computer Vision**: Image processing, object detection, and classification.
- **Data Analysis and Visualization**: Pandas, NumPy, Matplotlib, or Seaborn.
- **Data Engineering**: Skills in data pipelines and ETL (Extract, Transform, Load) processes.
- **Hardware Integration**: Experience with IoT devices and embedded systems.

Languages

- **Arabic**
- **English**

Recent Projects

• **Plant steady state tool:**

Project Description: This tool is designed using Python to evaluate whether a plant is in a steady-state condition by analysing sensor data. It also averages sensor data over one-hour intervals when the plant is in a steady state and saves the results in an Excel file.

• **Dynamic AI System Using Large Language Models (LLMs) GPT-3.5 Turpo (Research Project):**

Project Description: The system utilized a conversational interface powered by GPT-3.5 Turbo and LangChain, allowing users to enter human language queries and receive relevant responses extracted from PDF documents. The system aims to enhance productivity, save time, and improve the accuracy of information retrieval from PDFs.

• **Predicting Anxiety Among Technical Employees: A Machine Learning Approach (Research Project):**

Project Description: Developed a machine learning model to predict anxiety among technical employees using the OSMI Mental Health in Tech Survey 2016 data. This approach aims to enhance employee well-being and productivity by providing organizations with insights to better manage and support their technical workforce. By applying five advanced algorithms—Random Forest Boosting, Decision Tree, Bernoulli Naive Bayes, Logistic Regression, and Support Vector Machine—the study achieved the highest accuracy of 96.23% with the Random Forest algorithm, demonstrating its potential in preemptive mental health strategies.

• **Sustainable Development Goal 1 End poverty (SDG1) (Research Project):**

Project Description: Conducted research on the impact of increasing internet and satellite technology on reducing poverty in low-income countries as part of SDG1 initiative. This study focused on analyzing the role of technology in poverty reduction, collecting and analyzing relevant data and statistics, and contributing to the understanding of how technological advancements can benefit low-income communities.