Qusai Madraswala

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EDUCATION

- **Bachelor of Technology in Computer Science & Engineering (CGPA: 8.85)**
  GITAM University | Sep 2022 – Apr 2026
- **12th –** Resonance | 2022
- **10th –** Timpany Senior Secondary school | 2020

PROJECTS & HACKATHONS

1. **Medical Report Analyzer –** *Technova Hackathon, August 2024*
   Designed and developed a LangGraph-based platform to analyze medical reports, perform symptom analysis, and identify root causes for complex conditions.
   - **Researched and implemented advanced Generative AI tools, including LangGraph and OCR, to extract and analyze critical data.**
   - **Collaborated closely with web developers to optimize the model for seamless integration into a production-ready website. GitHub Repository**

2. **DeepFake Detection**
   Developed a DeepFake detection system leveraging a hybrid model combining Long Short-Term Memory (LSTM) networks and convolutional layers..
   - **Engineered the model to analyze spatial and temporal features for enhanced detection accuracy.**
   - **Trained on a diverse dataset of real and synthetic videos, achieving high precision in identifying manipulated content.**
   - **Optimized for efficient processing, enabling the detection of deepfakes in real-time scenarios.**

3. **Sign Language to Speech –** *Smart India Hackathon, September 2024*
   Developed a computer vision system using Random Forest to recognize and interpret sign language gestures into spoken language.
   - **Achieved 85% accuracy in real-time detection and translation, significantly enhancing communication accessibility for the hearing impaired.**
   - **Collaborated with web developers to design and deploy the website; optimized model performance with real-time data.**
   - **Ranked 6th place in a College-level competition. GitHub Repository**

4. **Music Generation**
   Designed a music generation system utilizing Long Short-Term Memory (LSTM) networks to predict subsequent musical notes based on input sequences.
   - **Trained the model on a dataset of MIDI files, enabling it to learn complex patterns and structures in music.**
   - **Developed a framework for generating coherent and stylistically consistent compositions.**

5. **COVID-19 Detection**
   Developed a COVID-19 detection system using a Convolutional Neural Network (CNN) with a pre-trained Xception model to analyze chest X-ray images.
   - **Conducted extensive research on medical imaging techniques, achieving high diagnostic accuracy in identifying COVID-19 cases.**
   - **Leveraged advanced data preprocessing techniques to enhance image quality and model robustness. GitHub Repository**

SKILLS

- **Machine Learning**: Supervised Learning, Unsupervised Learning, Data Analysis, Testing & Evaluation
- **Deep Learning**: ANN, CNN, RNN, Transformers (TensorFlow), LSTM.
- **Generative AI**: Langchain, LanGraph, Retrieval Augmented Generation, Fine-Tuning Large Language Models
- **Programming Languages**: Python, Java, C
- **Collaboration & Communication**: Cross-functional teamwork, Presentation of technical results, Research on ML trends

CERTIFICATIONS

- Generative AI – Google cloud, November 2024
- Machine Learning – Udemy August 2024

HOBBIES

- **Competitive Programming**: Active on LeetCode.