

AMEEN QURESHI

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EDUCATION

University of Southern California

Los Angeles, California

Master of Science in Applied Data Science

January 2024 - May 2025

- Honors: Dean's Honor List, GPA: 4.0 Membership: Graduates Rising in Information and Data Science

University of Southern California

Los Angeles, California

Bachelor of Science in Computational Linguistics/Minor in Economics

August 2022 - May 2025

- Honors: Dean's Honor List, GPA: 3.85 Membership: ACM, Blockchain SC, Creative Labs SC, Techie

WORK EXPERIENCE

Speech Production and Articulation Knowledge Group - Los Angeles, California

May 2024 - November 2024

Research Assistant

- Partnered with a PhD researcher to design an experiment to accurately segment parts of the vocal tract
- Developed a SAM2 model pipeline to accurately segment the vocal tract, successfully identifying and monitoring key movements crucial for understanding vocal tract behavior, such as the airway.
- Enhanced precision by analyzing articulator movements through centroids and gestural scores.
- Presented research findings at the 2024 Acoustical Society of America annual conference, showcasing advancements in vocal tract modeling using image segmentation and computer vision techniques.

Yaqeen Technology Consultancy LLC - Anderson, Indiana

April 2024 - August 2024

Data Science Intern

- Utilized machine learning to analyze relationships between caller sentiment and agent performance, utilizing support vector machines to optimize client-agent assignments allowing for longer and more productive phone calls
- Designed tailored solutions for Reliant Capital, optimizing interactions and achieving a 20% boost in collection success
- Delivered actionable insights to stakeholders, influencing decisions leading to a recovery of 5K in missed earnings

Western Digital - San Jose, California

June 2023 - August 2023

Data Analytics Intern

- Developed NLP Scripts employed daily by four HR Analysts, reducing time required for assessing HR queries by 90%
- Implemented a random forest capable of forecasting employee turnover rates ranging from 20-58% employee turnover rates based on university placement for current graduates
- Created intuitive dashboards using Angular/Nest.js and Tableau/PowerBI for C-level executives to easily access and interpret key HR statistics for better strategic insights.
- Built a sentiment analysis bot leveraging BERT to evaluate 900+ feedback forms, guiding adjustments for following quarter

PROJECTS

Custom Poetry Reader

January 2025

- Built a custom AI voice synthesis pipeline using Coqui TTS, fine-tuning it on a dataset of Drake's voice for Valentines
- Integrated sentiment analysis, emotions, and pauses to make AI-generated poetry sound more humanlike
- Applied speech processing techniques to adjust prosody, pitch, and pacing, creating a realistic rap-style performance

AI Speech Coach

December 2024

- Designed and optimized base prompts to enhance AI-generated speech coaching, improving clarity, tone, and engagement.
- Applied linguistic expertise to refine AI-generated feedback, detecting filler words, hesitations, and sentiment shifts.
- Developed and evaluated prompt chains for adaptive responses using zero-shot, few-shot, and chain-of-thought prompting.
- Conducted A/B testing on prompt variations, increasing response coherence and engagement by 20-30%.

YouTube Livestream Sentiment Analysis

July 2024

- Designed a three stage Data Pipeline with Apache Kafka, Spark, and Redis to extract data from the YouTube API
- Preprocessed data in real time to gauge average sentiment using Natural Language Processing in YouTube livestream chat
- Created an interactive dashboard using Streamlit to show all time peaks and all-time lows for emotion in the chat

SKILLS & INTERESTS

Programming Languages/Databases: C++, Java, Python, Html, CSS, JavaScript, SQL, MongoDB, SQLite

Web/Frameworks: Flask, Node.js, Next.js, React.js, Git, NumPy, Pandas, matplotlib, scikit-learn, Pytorch, TensorFlow, AWS

Coursework: Machine Learning, Data Structure & Algorithms, Speech Synthesis, Introduction to C++, and Robotics