

Mason Scott

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EDUCATION

University of Maryland

Bachelor of Science in Computer Science, Minor in Statistics

College Park, MD

Expected: May 2026

EXPERIENCE

High Sierra Pools

Pool Manager

Frederick, MD

May 2024 - Aug. 2024

- Led team of lifeguards, organized daily operations, and coordinated emergency responses with EMS/police
- Demonstrated leadership, crisis management, and communication in high-stress situations

Lifeguard

May 2022 - Aug. 2023

- Monitored swimmer safety and performed water rescues when necessary
- Enforced safety protocols and assisted in daily pool maintenance

Kumon

Volunteer Tutor

Urbana, MD

Aug. 2017 - April 2018

- Tutored young students on math and reading fundamentals
- Graded assignments and organized educational materials

PROJECTS

Music Recommendation Engine | *FastAPI, Celery, Redis, Docker, MySQL, Spotify/YouTube APIs, Scikit-Learn*

- Designed and deployed a backend system for a full-stack music recommendation app, powered by audio embeddings and vector similarity
- Built an asynchronous processing pipeline using Celery and Redis to handle Spotify data collection, YouTube audio retrieval, and feature extraction with librosa
- Dockerized the service for scalable, production-ready deployment with task isolation and retry logic for external API calls
- Exposed RESTful endpoints for saving user data, tracking job status, and serving personalized song recommendations to the frontend

Air Quality Predictor | *Python, StreamLit, TensorFlow, AWS, MySQL, OpenWeatherMap API, Plotly*

- Developed and deployed an LSTM-based air quality prediction model using TensorFlow, achieving a test RMSE of 0.1668, and integrated real-time data from the OpenWeatherMap API
- Built a scalable data pipeline using MySQL on AWS and created a user-friendly Streamlit web app for real-time air quality monitoring and predictions

Mask Detection CNN | *Python, TensorFlow, Image Classification, TaiPy*

- Built and trained a CNN with TensorFlow to identify if a person is wearing a mask correctly, achieving 99.24% test accuracy
- Built TaiPy GUI for real-time image upload and predictions

Data Analysis Report (CMSC320 Class Project) | *Python, Pandas, Matplotlib, Numpy, SciPy Stats*

- Statistical Analysis of Political Influence: Used Chi-square tests to identify how political affiliations affect moral judgments in Reddit AITA responses
- Data Processing and Visualization: Cleaned and categorized survey data, handled missing values, and created visualizations to highlight ideological differences

TECHNICAL SKILLS

Languages: Python, C, Java, SQL, R, Rust, SAS

Web: JavaScript, HTML/CSS

Frameworks: React, TensorFlow, Streamlit

Libraries: NumPy, Pandas, Scikit-learn, Keras, Plotly, Matplotlib

Tools/Cloud: Git, Docker, AWS, VS Code, Jupyter, PyCharm