Uzair Mohammed

moham147@msu.edu linkedin.com/in/uzair-m github.com/uzairname 248-843-3985

Education

Michigan State University - East Lansing, MI - Honors College, College of Engineering
B.S. in Computational Data Science. Minor in Mathematics *Grad: Apr. 2025*

Relevant Coursework: Machine Learning, Deep Learning, Data Analysis & Visualization, Software Engineering, Data Structures & Algorithms, Database Systems, Scientific Programming, Linear Algebra, Differential Equations, Physics, Economics, Linguistics.

Experience

Workshop Director - MSU Artificial Intelligence Club *Sep. 2022 – Present*
- Lead a team of organizers to plan and execute weekly workshops at MSU's premier computer science student organization.
- Provide over 1000 students with hands-on learning in in computer vision, natural language processing, and generative AI using Scikit-Learn, PyTorch, OpenCV, and other technologies. Doubled member engagement over 3 semesters.
- Establish timelines, assess content quality, develop connections, and implement feedback from advisors and students.

Mathematics Researcher - University Undergraduate Research and Arts Forum *Sep. 2021 - Apr. 2022*
- Analyzed and visualized optimal strategies for a novel turn-based combinatorial game. Visualized alpha-beta pruning decision tree using Matplotlib and benchmarked complexity against similar games, using SciPy and SageMath.
- Presented findings and published a video at UURAF to >100 researchers and students, contributing to the fields of experimental mathematics and combinatorial game theory.

Projects & Awards

Global Nominee - Open Source Marketplace - NASA Space Apps Challenge *Oct. 2023*
- Developed an app with a team of 5 to network contributors and open science repositories based on skills and interests.
- Trained a recommendation algorithm with link prediction and OpenAI embeddings to connect hundreds of users and repos.

Awarded Best Use of AI - Live Transcription Glasses - HackUIowa 2023 *Sep. 2023*
- Developed the back-end of a full stack speech recognition device with a 4-person team to improve accessibility.
- Integrated Cohere and Google Cloud Speech to Text APIs to display and summarize live conversations to one's field of view.

Awarded First Place - CTF Challenge - Hack Dearborn 2 *Oct. 2023*

MSU Quantitative Finance Club - Member *Sep. 2023 - present*
- Actively engage in weekly meetings to learn about quant development and research from industry professionals.

AI Resume Matcher - NLP Project *Jan. 2023*
- Designed a semantic search pipeline to match resumes to job postings using spaCy and the Cohere API. Analyzed over 50 skills. Prototyped a Flask web app with a team of 4 for the SpartaHack 8 Hackathon.

Smart Attendance - Computer Vision Project *Sep. 2021 - Jan. 2022*
- Developed a web app with a team of 12 to automate taking attendance with a camera.
- Applied a convolutional neural network in Dlib to recognize and compare faces, achieving 99.4% accuracy.

Statistical Skill Ranking & Matchmaking - Full Stack Application *Jan. 2021 - Dec. 2022*
- Innovated a Bayesian Elo model to match players and manage leaderboards for competitive games, serving **200 users**.
- Configured a CI/CD pipeline with GitHub Actions and Docker to deploy an app to AWS EC2, reducing build time and errors.

Other Projects

Video clip extractor using OpenAI Whisper, PCA, BERT, and NLTK. Sentiment analysis-powered chat moderation. Rocket League bot using reinforcement learning. Agent based modeling of disease, forest fire, and evolution.

Technical Skills

Languages & Technologies: Java, Python (PyTorch, Scikit-Learn, spaCy, pandas, NumPy, SciPy, SymPy, Matplotlib), C++, R, Typescript, JavaScript, LangChain, Git, CI/CD, Agile Development, Streamlit, Flask, REST APIs, SQL (Postgres, SQLite), GraphQL, Vector databases, MongoDB, NeonDB, Supabase, Docker, AWS, Azure, Cloudflare, Google Cloud Platform, VS Code, PyCharm, MATLAB, Maple, SageMath, LaTeX.

Honors

Eagle Scout (2018) National Merit Semifinalist (2021) MSU Special Merit Scholarship (2021) Dean's List (2021-2023)