

Uzair Mohammed

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EDUCATION

Michigan State University - Honors College, College of Engineering
Bachelor of Science in Computational Data Science. Minor in Mathematics

East Lansing, MI
Sep. 2021 - Apr. 2025

Relevant Coursework: Data Analysis, Machine Learning, Deep Learning, Data Visualization, Statistics, AI Safety & Ethics, Software Engineering, Data Structures & Algorithms, Database Systems, 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 in computer vision, natural language processing, and data analysis. Assess content quality, establish timelines, delegate tasks, and implement feedback from advisors and students to double member engagement over 3 semesters.
- Provide >500 MSU students with hands-on learning with technologies including Scikit-Learn, PyTorch, LangChain, Hugging Face, and Kaggle.

Undergraduate Researcher - University Undergraduate Research and Arts Forum

Sep. 2021 - Apr. 2022

- Formulated and investigated optimal strategies for a novel turn-based combinatorial game in SciPy and SageMath
- Visualized alpha-beta pruning decision tree using Matplotlib and benchmarked complexity against similar games.
- Presented findings and published a video at the 2022 UURAF forum to >100 researchers, contributing to the fields of experimental mathematics and combinatorial game theory.

PROJECTS & INVOLVEMENT

Live Transcription Glasses - HackU Iowa 2023 Project | Awarded Best Application of Artificial Intelligence

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.

MSU Quantitative Finance Club - Member

Sep. 2023 - present

- Actively engage in weekly meetings to learn about quant development and research from industry professionals.

Resume Matching System - SpartaHack 8 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 - AI Club Computer Vision Project

Sep. 2021 - Jan. 2022

- Developed a web app to take attendance with a camera, automating and increasing attendance efficiency.
- Applied a convolutional neural network in Dlib to recognize and compare faces, achieving **99.4% accuracy**.
- Collaborated with a team of 6, implementing best practices for Python code documentation and version control in git.

ELO Ranking Platform - Independent Statistics Project

Jan. 2021 - Dec. 2022

- Innovated a novel Bayesian inference model to match and rank players of an arbitrary competitive game by skill level.
- Developed a Discord bot to host leaderboards in an SQL database, serving **200 global users**.
- Configured a CI/CD pipeline with GitHub Actions to deploy a Docker container to AWS EC2, reducing errors by 50%.

Other Projects

Video clip extractor using OpenAI Whisper, BERT, and NLTK. Reinforcement learning Rocket League bot. Sentiment analysis-powered social media moderation with Perspective API. 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)