Uzair Mohammed

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EDUCATION

Michigan State University - Honors College, College of Engineering | East Lansing, MI
Bachelor of Science in Computational Data Science. Minor in Mathematics | *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*
- Plan and lead workshops to provide **>500 MSU students** with hands-on learning in computer vision, natural language processing, and data analysis with technologies including Scikit-Learn, PyTorch, LangChain, Hugging Face, and Kaggle.
- Assess content quality, establish flexible timelines, delegate tasks between a team of 5, and implement feedback from advisors and students to **double member engagement** over 3 semesters.

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.

EXTRACURRICULAR ACTIVITIES

Hologlass - HackUIowa 2023 Project | Awarded Best Application of Artificial Intelligence | *Sep. 2023*
- Developed the back-end of a full stack speech recognition application with a 4-person team to improve accessibility.
- Integrated Cohere and Google Cloud Speech to Text APIs to display and summarize live conversations on a pair of glasses.

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 with MongoDB, 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. Rocket League bot using reinforcement learning. Sentiment analysis-powered social media moderation with Perspective API. Agent based modeling of disease, forest fire, and evolution in Python.

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)