Uzair Mohammed

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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 meetings 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.

AI Engineer - Youlearn.ai *Sep. 2023 - present*
- Lead a team of 6 to develop a personalized, NLP-driven education service using agile practices, reaching >1000 users.
- Deployed a vector store and retrieval augmented generation to create an AI tutor based on scraped online content.

Mathematics Researcher - University Undergraduate Research and Arts Forum *Apr. 2022*
- Analyzed properties of a novel combinatorial game using alpha-beta pruning, and benchmarked complexity against similar games, using SciPy and SageMath. Presented findings and published a video at UURAF to >100 researchers and students.

Projects & Awards

Awarded Second Place - Terminal AI - MHacks 16 *Nov. 2023*
- Collaborated with a team of 4 to develop a Python library and CLI that captures errors, analyzes a codebase, and gives intelligent suggestions in the terminal using GPT. Awarded "best developer tool" in the MHacks 2023 hackathon

Awarded 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 Cybersecurity 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*
- Invented 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.

Technical Skills

Languages & Technologies: Java, Python (PyTorch, Scikit-Learn, spaCy, Pandas), C++, R, Typescript, JavaScript, MATLAB, Git, SQL (Postgres, SQLite), GraphQL, Vector databases, Hugging Face, MongoDB, Docker, AWS, Azure, Google Cloud Platform, Maple, SageMath.

Honors

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