

James Muguiyi

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EXPERIENCE

University of Rochester

Web Developer

Rochester, New York

Oct 2022 – Present

- Updated the University IT's student-built logistics web app, LASSO, using React and Node.js and Express, integrating new design elements and functionalities, resulting in almost 50% less complaints, bugs and other user reported issues.
- Spearheaded the integration of Google's Sign-in and Calendar APIs, empowering students and staff to effortlessly sync their schedules with personal calendars. Resulted in a 26% reduction in scheduling conflicts and improved overall time management efficiency.

Local Company (Acting Globally)

Web Developer Intern

Remote

Sep 2023 – Present

- Worked with four developers to create collaborative tools for volunteers and grassroots groups, enabling streamlined partnerships and expanded service capabilities.
- Designed features to facilitate collaboration, fostering efficient communication and resource sharing among users.
- Engineered a highly efficient back-end system that streamlined data maintenance and retrieval processes resulting in faster retrieval and updating across three distinct databases.

SEO Career

Tech Developer Intern and SEO EDGE Participant

Remote

June 2022 – May 2023

- Participated in a long-term career preparation and mentorship program to develop technical and career skills.
- Completed 300+ hours of technology-focused training on software development, databases, testing, and implementation.
- Designed web applications using Python, HTML, CSS, and MySQL.

University of Rochester

Workshop Leader / Teacher's Assistant (Intro to Python Programming)

Rochester, New York

September 2021 – December 2021

- Mentored and guided a group of 12 students through weekly engaging sessions utilizing thought-provoking questions and problem-solving activities to improve overall understanding of course material and boost student retention.
- Facilitated grading as well as aided students with problems pertaining to course work.

PROJECTS

American Sign Language (ASL) Reader

Python

Libraries: OpenCV, MediaPipe, Numpy, CVZone

- Engineered a Python application integrating OpenCV and MediaPipe for real-time sign language recognition from video streams.
- Utilized Google's Teachable Machine for machine learning model training to accurately identify ASL alphabet signs.
- Implemented image capturing and processing for sign analysis, with a focus on enhancing recognition accuracy

Face Recognition Attendance Tracker

Python

Libraries: Pickle, Face-recognition, CVZone, Firebase, Numpy

- Developed a facial recognition system for attendance tracking using Python, OpenCV, and Firebase.
- Integrated real-time facial recognition with database verification to log attendance accurately.
- Enhanced data efficiency and processing speed through advanced image encoding techniques.

Hand Volume Control

Python

Libraries: OpenCV, MediaPipe, ComTypes, Numpy

- Programmed a Python-based hand gesture recognition system using OpenCV and MediaPipe for interactive volume control.
- Applied advanced algorithms for real-time hand tracking and distance measurement between thumb and index finger.
- Integrated the system with PC volume controls, displaying live feedback on volume levels and finger spacing.

TECHNOLOGIES

Languages: Python, C++, C#, JavaScript/TypeScript, HTML/CSS

Frameworks: React, Node.js, Next.js, Express, Flask, Tailwind

Tools: MongoDB, DynamoDB, Postgres, Git, AWS

EDUCATION

University of Rochester

Rochester, New York

Bachelor of Arts in Computer Science and Minor in Psychology

Fall 2020 – Fall 2024

Courses: Data Structures and Algorithms, Mobile development (Android), Web Development, Introduction to Artificial Intelligence