

# James Muguiyi

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## EDUCATION

### University of Rochester

May 2025

*Bachelors of Arts in Computer Science, Minor in Psychology*

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

## PROFESSIONAL EXPERIENCE

### University of Rochester

Sep 2024 – present | Rochester, NY

*HCI Research Assistant*

- Research and develop an **AI/ML-powered tools** to assist deaf or hard-of-hearing children in early language development.
- Implement ASL word recommendation strategies with Stanza pipelines, BERT models, and part-of-speech analysis.
- Redesigned the legacy system into a portable version with **Flask, JavaScript, and Docker** and deploy it on **AWS**, enabling remote user studies and **reducing data collection time by 1 week per participant** while **doubling user participation rate**.

### iD Tech

Dec 2023 – May 2024 | Remote

*Software Programming Instructor*

- Taught **40 lectures in introduction to programming in Python and JavaScript**.
- **Facilitated 25+ classes of 10+ students**, prioritizing the safety, education, and well-being of each student in an online, fast-paced environment.

### Acting Globally

Sep 2023 – Aug 2024 | Remote

*Software Engineering Intern*

- Collaborated with a team of four developers to create innovative tools for volunteers and grassroots organizations including **dynamic sign-up sheets** and **project dashboards**.
- Aided in building a website using **React.js** and **Next.js** and deploying it using Vercel.
- Engineered a back-end system using **MongoDB** and **Node.js** that optimized data maintenance and retrieval processes, achieving a **35% faster data retrieval** and update rate across three MongoDB databases.

### University of Rochester

Oct 2022 – present | Rochester, NY

*Software Developer*

- 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**.

### SEO Career

Jun 2022 – May 2023 | Remote

*Software Developer Intern*

- 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 **3 web applications** using **Flask, HTML, CSS, and MySQL**.

### Simon Business School

May 2021 – present | Rochester, NY

*IT Consultant*

- Collaborated with clients to resolve software installation issues, network connectivity problems, and hardware complications, achieving a **90% issue resolution rate**.
- **Assisted 30+ professors** in transitioning to virtual environments, classes, and events, resulting in increases in digital proficiency and a reduction in technical difficulties experienced during sessions.
- Developed a **Python script** to automate the adding and removing of **500+ students** from various Slack spaces using **Slack's API**.

## SKILLS

**Languages:** Proficient: Python, JavaScript | Intermediate: TypeScript, C++, SQL | Beginner: Java, Go, Kotlin

**Tools:** React, Spring Boot, Node.js, Next.js, Express, Flask, CSS, Docker, Git, NoSQL, PostgreSQL, Git

## PROJECTS

### Shopping Agent

Jan 2025 – present

*Software Engineer*

- Created a team of **AI agents** using **Python** and **Phidata** designed to search products, browse various online stores, and make purchases.
- Designed a web page using **React.js** and **Next.js** to enable users to input a shopping list and engineered an API using **FastAPI**.

### Golazo.UR

Jun 2024 – present

*Software Engineer*

- An online FIFA video game tournament and player management system using **TypeScript**.
- Designed and optimized a **SQL database** to efficiently store and manage user profiles, match records, and tournament data, supporting **50+ active users**.

### Voice Vault - Web Page Summarizer

Nov 2024 – Dec 2024

*Software Engineer*

- A Chrome web extension built in **JavaScript** that takes content from a web page and summarizes it using the **GPT-4.o model** and displays it to users.
- Integrated a Text-to-Speech function using **Microsoft Azure services**.

### American Sign Language Reader

Jun 2023 – Jul 2023

*Software Engineer*

- Engineered a **Python** application integrating **OpenCV, CVZone** 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.