

# Aaron Hsu

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## EDUCATION

### University of Michigan - College of Literature, Science, and Arts

Ann Arbor, MI

B.S in Computer Science

April 2025

- **Relevant Coursework:** Data Structures and Algorithms | Web Design, Development, and Accessibility | Introduction to Computer Organization | Database Management Systems | Statistical Computing | Introduction to AI
- **Current Coursework (F24):** Introduction to Computer Security | Conversational AI | AI in Education

## SKILLS

- **Languages:** Python, SQL, C++/C, C#, Java, JavaScript, HTML, CSS, R, Mandarin (Native Fluency)
- **Frameworks/Tools:** Visual Studio, VS Code, Git, .NET, Microsoft Office, Microsoft Azure, LangChain

## WORK EXPERIENCE

### First Solar

Perrysburg, OH

Software Engineering Intern

May 2024 - August 2024

- Implemented automatic, 30-second interval retry configurations for Mass Transit consumers inside of RabbitMQ integrated applications, allowing the system to effectively handle transient errors and prevent data loss.
- Built an end-to-end retrieval augmented generation system using LangChain on 500+ company documents, successfully deploying a GPT-integrated web application and reducing mean time to repair (MTTR) by up to 2 hours in several cases.
- Utilized prompt engineering and fine-tuning techniques to enhance SQL query generation. Documented effective queries for high probability use cases, reducing mean data retrieval time by up to 50%.

### Tiimo

Copenhagen, DK

Engineering Intern

May 2023 - July 2023

- Conducted biweekly smoke tests of Android beta application alongside the development team.
- Documented issues in Notion/Linear; developed solutions for 30+ functionality bugs and proposed various UI/UX fixes.
- Outreached to companies and influencers, pitching the app and pursuing B2B leads.

### Shinsung SoundMotion

Ann Arbor, MI

Engineering Intern

May 2022 - September 2022

- Designed various PCBs using Sprint Layout and Cut2D, integrating models into silicon neural probes for clinical testing. Engraved designs on copper boards using a Wegstr CNC Prototyping Mill aiding in production of prototyping.
- Operated a wire bonder and a K&S Hydrogen Ball Bonder to aid in PCB design, successfully reducing drill bit size to .019 mm to meet specifications.

### University of Michigan - Center for Entrepreneurship

Ann Arbor, MI

Instructional Aide

September 2023 - Present

- Overseeing operations for ~30 students, managing logistics such as attendance and grading.
- Answer student questions and prepare lecture material for each class.

## PROJECTS

### Automated Retrieval Augmented Generation (RAG) Quality Assessment - Python

- Developed a script to evaluate RAG systems across different GPT/embedding model combinations, fully automating the testing process and eliminating the need for manual data entry.
- Conducted 10+ experiments using various LLM parameter settings, documenting and presenting results to stakeholders.

### Custom Relational Database ("SQL") - C++

- Designed and implemented a custom relational database emulation program in C++ with hash maps, focusing on efficient data storage, retrieval, and algorithmic optimization.
- Created an interactive shell interface that allowed users to execute queries and interact with the database.

## ACTIVITIES

### Tau Epsilon Kappa - Professional Technology Fraternity

Ann Arbor, MI

VP of Operations

January 2023 - Present

- Coordinate event logistics, organizing professional development and networking events.

### Maize FC – Men's Club Soccer at Michigan

Ann Arbor, MI

President

February 2024 - Present

- Oversee logistics including scheduling, resource/financial allocation, and fostering a supportive team environment.