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, Microsoft Office, Microsoft Azure, LangChain

WORK EXPERIENCE

First Solar   **Perrysburg, OH**
Software Engineering Intern   *May 2024- Present*
- Implemented an end-to-end retrieval augmented generation (RAG) system 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%.
- Implemented retry behavior in RabbitMQ for FinishingApp messages, preventing an hour or more of daily data loss.

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.
- Implemented functionality supporting table joins, indexes, and various queries.

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.