Grace G. Liu

Ann Arbor, MI | [LinkedIn](#) | [goldengliu.github.io](#) | goldengliu@gmail.com

EDUCATION

University of Michigan - Ann Arbor **Ann Arbor, MI**
B.S. in Computer Science *June 2023*
- **Relevant Coursework:** Data Structures and Algorithms, Database Management Systems, Web Systems, User Interface Development, Intro to Computer Security, and Mobile Application Development for Entrepreneurs

SKILLS

- **Languages:** C++/C, Python, JavaScript, HTML/CSS, SQL, Golang
- **Technologies:** Linux, Git, Figma, REST API, Flask, Docker, AWS EC2 Instances, MapReduce

PROJECTS

Instagram Web Clone
Flask Python, JavaScript, HTML, CSS, SQL *September – October 2022*
- Developed a templated static site generator using HTML, CSS, Python programming, and shell scripting.
- Implemented an interactive website with a server-side dynamic page rendering system, including user creation, post management, comments, and likes.
- Utilized SQL for data storage and retrieval and implemented sessions for user authentication and session management.
- Created a client-side dynamic pages application with REST API and developed a JavaScript-based client application that interacts with the REST API using AJAX calls.
- Deployed to Amazon Web Services using EC2 instances, Gunicorn for server-side dynamic pages, and Nginx for static pages server.

Search Engine
Python, JavaScript *November – December 2022*
- Developed a scalable search engine utilizing text analysis (tf-idf) and link analysis (PageRank) to display accurate and relevant search results.
- Implemented a pipeline of MapReduce programs to create a segmented inverted index of web pages, ensuring efficient indexing and retrieval of data.
- Built an Index server as a REST API app that returned search results in JSON format and developed a user-friendly Search server with a user interface resembling that of Google or Bing.

Projects++
Figma *October – December 2022*
- Identified a gap in students' career exploration by analyzing seven interviews, leading to the conceptualization and proposal of an app that assists students in exploring diverse career paths within the computer science field through a compilation of profession-specific projects.
- Collaborated with a team of five to design a functional prototype of the app using Figma, prioritizing intuitive user experience and seamless navigation.

WORK EXPERIENCE

Michigan Technological University – Brain Inspired AI Lab **Ann Arbor, MI**
Research Assistant Intern *August 2023 – Present*
- Applied deep learning techniques in collaboration with research team members to achieve project objectives.
- Contributed to cutting-edge neuromorphic computing research, with a specific focus on applications in the medical field.
- Managed server environment including user accounts, permissions, storage, and Python packages to support research workloads.

University of Michigan School of Public Health **Ann Arbor, MI**
Information Technology Assistant *September 2022 – August 2023*
- Updated event pages on the school's website, ensuring accuracy and timeliness of information.
- Assisted in the development of the faculty/staff section of the school website, ensuring accurate data transfer using Omni CMS.

University of Michigan College of Engineering **Ann Arbor, MI**
Engineering Administration Computer Support *May 2019 – August 2019*
- Provided Level 2 IT support to 100+ administrative staff and faculty across the College of Engineering.
- Diagnosed and resolved technical issues with PCs, Macs, mobile devices, printers, email, and software applications.