Amber Campbell

1campbellamber@gmail.com | (224) 908-7002 | Chicago, IL | linkedin.com/in/ambercam

EDUCATION

University of Michigan-Ann Arbor   **Ann Arbor, MI**
B.S. Computer Science, Minor in History of Health and Medicine   *May 2025*
- 3.96/4.0 GPA
- **Relevant Coursework**: Advanced Operating Systems, Web Systems, Data Structures and Algorithms, Practical Data Science, Applied Biostatistics, Introduction to Computer Architecture, Agent-Based Modeling
- **Extracurriculars**: Sexual Assault Prevention and Awareness Center Volunteer (Art Show Chair, 2022), Girls in EECS, Alpha Delta Pi Sorority (Director of Inclusion, 2022), Public Health Association

University of College London   **London, England**
Exchange Semester in History and Philosophy of Science   *Jan. 2024 – May 2024*

SKILLS

Languages: C++, PHP, Python, JavaScript, HTML/ CSS, SQL, R
Frameworks and Libraries: Laravel, Flask, Django, React, RESTful APIs
Databases: MySQL, PostgreSQL, SQLite
Tools: Docker, Postman, WSL/Ubuntu, Git, JIRA, Visual Studio, VSCode, GDB

WORK EXPERIENCE

Center For Healthcare Engineering and Patient Safety   **University of Michigan — Ann Arbor, MI**
Healthcare Engineering Intern   *Aug. 2023 – Jan. 2024, Aug. 2024 – Current*
- Adopt design patterns to develop a template library and bootstrap for operational healthcare simulation optimization projects in Python, allowing seamless interfacing with SQL databases and Pandas Dataframes
- Designed and developed code for generating optimized shift schedules using the CPLEX library, improving operational efficiency for 20 physicians and administrators in Michigan Medicine's Trauma department

DOCSI Health   **Minneapolis, MN**
Software Engineering Intern   *June 2024 – Aug. 2024*
- Deployed and maintained features for a surgical waste elimination platform, collaborating with cross-functional teams to optimize supply-chain processes and reduce waste within health systems
- Implemented production-level front-end and back-end code for the web application using React and Laravel, significantly enhancing customer satisfaction, physician engagement, and user experience, contributing to strategic design direction and team culture in a start-up setting

Menlo Innovations   **Ann Arbor, MI**
Software Engineering Intern   *June 2023 – Aug. 2023*
- Developed EHR-agnostic prescription monitoring web application for health systems using Django framework, streamlining prescription management processes for nurses whilst adhering to FHIR interoperability standards

PROJECTS

Michigan Plan For Appropriate Tailored Healthcare (MiPATH)   **Michigan Medicine — Ann Arbor, MI**
Computational Research Assistant   *June 2023 – Aug. 2023*
- Integrated dynamic features for C++ discrete-event simulation for prenatal appointment scheduling, utilizing real-world data to enhance clinical operations and support development of new prenatal care guidelines

Threading Library in C++   **University of Michigan — Ann Arbor, MI**
Advanced Operating Systems   *Fall 2024*
- Co-designed and implemented C++ threading library, utilizing RAII principles for resource management and ensuring safe thread lifecycle handling, integrating advanced functionality to support multiple CPUs
- Developed core threading and synchronization mechanisms, including thread creation, yield, join, mutex locks, condition variables, as well as interrupt handling whilst optimizing CPU scheduling and thread synchronization