Adam Gunn

asgunn@umich.edu · (312) 385-9382 · Chicago, IL · https://github.com/adamgunn

EDUCATION

University of Michigan   **May 2024**
Bachelor of Science Engineering, Computer Science   *Ann Arbor, MI*
GPA: 3.82 / 4.00

Relevant Coursework

- Data Structures and Algorithms
- Intro. To Operating Systems
- Intro. To Computer Organization
- Intro. To Computer Security
- Web Systems
- User Interface Development

SKILLS

C/C++, Python, JavaScript, Git, React, SQL, Flask, AWS, HTML/CSS, Node.JS, MongoDB, C#

PROJECTS

Network File System – Intro. To Operating Systems   **Apr. 2023**
- Built a multi-threaded C++ program to manage a filesystem on a disk, allowing users to write to files and folders
- Enabled users to remotely make a request to the disk, such as deleting a file, using socket programming over TCP
- Designed the system with efficiency in mind, only using expensive disk reads and writes when absolutely necessary
- Permitted concurrent requests to the filesystem using read-writer locks, ensuring atomicity for individual inodes

Thread Library – Intro. To Operating Systems   **Jan. – Feb. 2023**
- Programmed robust C++ library enabling users to start concurrent tasks, using the Unix "ucontext" library
- Completed implementations for mutexes and condition variables alongside threads
- Included support for multiple CPUs, managing interrupts to guarantee that kernel code is always protected

Personal website – https://adamgunn.net   **Jul. 2021 – present**
- Applied combination of HTML, CSS, and JavaScript to implement frontend
- Created full content management system to view, create, and modify blog posts stored in PostgreSQL database
- Produced backend Flask app to serve frontend code and handle authorization for CMS, hosted on AWS EC2

Search Engine – Web Systems   **Nov. – Dec. 2022**
- Engineered Python program to analyze Wikipedia articles and generate search results for a given query
- Utilized MapReduce framework to determine term frequency of a specific word in the articles
- Effectuated Flask backend to calculate the TF-IDF score of each article to return the most relevant results

EXPERIENCE

NCR Corporation   **May – Aug. 2022, May – Aug. 2023**
Software Engineer Intern   *Atlanta, GA*
- Developed feature for self-checkout machines to automatically detect quantity of items using machine learning
- Established new option to pay with Bitcoin on self-checkout machines making use of an external transaction API
- Implemented user interface in C# necessary for both features, building off the existing UI codebase
- Constructed prototype for displaying the carbon footprint of purchased items at self-checkout machines

Michigan Hackers   **Dec. 2021 – present**
Website Contributor   *Ann Arbor, MI*
- Participated in weekly meetings with club executives as well as designers for the development of the club website
- Added "teams" and "contact" pages to the site via React, according to a Figma plan provided by designers

Michigan Men's Club Water Polo   **Dec. 2021 – present**
Webmaster   *Ann Arbor, MI*
- Serviced team website in React to ensure up-to-date information, rosters, and blog posts