

Adam Gunn

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EDUCATION

University of Michigan

Bachelor of Science Engineering, Computer Science

GPA: 3.84 / 4.00

May 2024

Ann Arbor, MI

Relevant Coursework

- Data Structures and Algorithms
- Intro. To Operating Systems
- Intro. To Computer Organization
- Intro. To Computer Security
- Web Systems
- Computer Networks

SKILLS

C/C++, Python, JavaScript, Git, React, SQL, Flask, AWS, HTML/CSS, React Native, 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 access 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

Video Streaming Content Delivery Network (CDN) – Computer Networks

Sep. – Oct. 2023

- Completed C++ proxy for handling requests for video files, sending a specific resolution based on network speed
- Programmed DNS server application to resolve domain names to different servers in order to balance server load
- Included ability to perform domain resolution based on client geographical proximity to optimize throughput

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

Software Engineer Intern

May – Aug. 2022, May – Aug. 2023

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 changes in C++ and C# necessary for both features, building off the existing legacy codebase
- Received “People’s Choice Award” for the audience-voted best intern project out of 100+ projects

Michigan Hackers

Website Contributor

Dec. 2021 – present

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

Webmaster

Dec. 2021 – present

Ann Arbor, MI

- Serviced team website in React to ensure up-to-date information, rosters, and blog posts