Cameron Hudson

+1 (248) 425-5199 cahu@umich.edu 825 Oak Cluster Ct, Howell, MI 48855

TECHNICALS

Languages: C, C++, Python, Bash, Java, HTML/CSS, JavaScript, SQL, Go
Skills/Frameworks: AWS microservice suite, BeautifulSoup, Flask, Git, Linux, ReactJS, REST API, scripting
Academic Knowledge Areas: data structures, algorithm design and analysis, computability, OS principles and design, software system design, computer architecture, full-stack development, intro security, statistics, linear algebra, multivariable calculus, software engineering principles, multi-threading, intro networking

EDUCATION

University of Michigan | Ann Arbor, MI
- B.S. Computer Science in December 2021
- Overall GPA: 3.4; Major GPA: 3.5
- Recipient of the Nik and Bina Bhatt Scholarship

Oakland Community College | Auburn Hills, MI
- Associate's Degree in Technological Sciences
- Graduated Summa Cum Laude in April 2018
- Overall GPA: 3.74

WORK EXPERIENCE

Amazon Web Services | Seattle, WA **June 2021 - August 2021**
Software Development Engineer Intern, VMware Cloud on AWS Team (Java, TypeScript)
- Architected full-stack functionality for displaying and validating private customer contract data
- Integrated back-end with other AWS microservices to provide seamless data flow from sales personnel to VMware. This eliminated a 30+ minute per contract manual process, saving hundreds of man-hours per year.
- Updated public-facing service by incorporating existing APIs to make customer registration fast and painless
- Streamlined client self-signup page by incorporating account details from multiple team-external data stores

University of Michigan | Ann Arbor, MI **September 2020 - December 2020**
Grader, EECS 370: Introduction to Computer Organization (C, ARM, x86)
- Analyzed, corrected, and constructively critiqued student work for a third-year course dedicated to low-level programming, CPU/memory design, and the hardware-software interface

University of Michigan | Ann Arbor, MI **September 2019 - April 2020**
Research Assistant, Fast and Unbiased Computer Vision Algorithms (Python)
- Contributed to the development of image labeling software used for generating the project's datasets

PROJECTS

"Mys-Query, Inc." Search Engine *(C, C++, Python, HTML/CSS)*
- Chief Software Systems Engineer of a six-person team that designed and constructed a fully-automated, general-purpose search engine distributed across over a dozen machines
- Independently developed the static ranker, robots.txt parser, and specialized STL container implementations
- Primary author of query response operations, including: front-end server's query management, distribution and compilation of relevant back-end systems, and interfacing all search components

Virtual Memory Manager *(C++)*
- Wrote memory pager for an OS kernel that translated virtual memory addresses of non-kernel processes into tangible physical addresses on machine hardware
- Defended hardware against processes accessing unauthorized, unallocated, and non-resident memory
- Created pages and migrated pages to/from disk based on process needs and physical resource availabilities

Instagram Clone *(Python, JavaScript, HTML/CSS, SQL)*
- Implemented Instagram clone with server-side dynamic pages using Python/Flask with PostgreSQL database
- Replicated Instagram client-side functionality (infinite scroll, live comment/like updates, etc) using ReactJS

Sudoku Solver *(C++)*
- Created an automated Sudoku solver capable of simulating probable outcomes in absence of explicit solution
- Incorporated predictive functionality by simulating values in the absence of a single explicit board solution

ACHIEVEMENTS

- Selected for the MLead leadership initiative to mentor incoming students during their college transition
- EECS 183 Computer Showcase Grand Prize winner for producing two games runnable on an Arduino Mini