Christopher Davis

508-210-6959 chcdavis@umich.edu linkedin.com/in/chcdavis github.com/chrsdavis chriscdavis.com

Education

University of Michigan Expected May 2026
Master of Science in Computer Science *Ann Arbor, MI*

University of Michigan | LSA Honors Expected May 2025
Bachelor of Science in Honors Mathematics, Computer Science *Ann Arbor, MI*
Coursework: Algorithms, Honors Real Analysis, Networking, Topology, Computer Vision, Probability Theory, Advanced Operating Systems, Stochastic Processes, Honors Algebra GPA: 3.75/4.0

Experience

Google May 2024 – Aug 2024
Software Engineer Intern *Seattle, WA*
- Created Google Home Platform update service, increasing access by over 350 million 3rd party smart-home devices. Implemented daemon in C++ to request, decompress, and dynamically link new runtimes for 3rd party devices, enabling on-demand updates independent of platform and manufacturer release schedules.
- Developed C++ libcurl HTTP client to manage device telemetry and interface Chromium update infrastructure.
- Achieved 65% reduction in application binary size by developing lightweight zip archive compression and XML C libraries, in addition to leveraging Linux system calls.

University of Michigan Radiological Health Engineering Lab Oct 2021 – Present
Algorithms Research Assistant *Ann Arbor, MI*
- Conducted algorithms research to engineer a UAV capable of autonomously localizing sources of radiation.
- Developed particle filter based and convolutional neural network informed reinforcement learning approaches.
- Received the GLHPS 1^{st} place Marie Curie Award with $1,000 prize for best Nuclear Engineering research.

Amazon Web Services May 2023 – July 2023
Software Development Engineer Intern *Seattle, WA*
- Created native AWS service to automate builds for security clearance regions, reducing deployment time by 63%. Built backend in Python using API Gateway, S3, Lambda, and DynamoDB.
- Developed streamlined Python CLI for backend to further improve quality of life for security cleared engineers.
- Won 1^{st} place MLU Champion award in AWS AutoGluon machine learning competition out of 350 interns.

Amazon Web Services May 2022 – Aug 2022
Propel Software Development Engineer Intern *Seattle, WA*
- Engineered a full stack native AWS web portal to manage and host weekly operational metrics for an organization of over 2,000 engineers, as well as the ability to review and page individual teams.
- Constructed front-end in React, with a Typescript and Python back-end leveraging DynamoDB for storage.

Extracurricular Experience

Quantitative Investment Society Sep 2021 – Present
President *Ann Arbor, MI*
- Spearheaded quant finance club as President, guiding 40+ students in building fully automated trading strategies.
- Developed automated trade execution pipeline on AWS EC2 using optimized C++ request parser.
- Directed projects including a trend extraction library, pairs trading, and an event-driven data scraping.

UofM International Collegiate Programming Competition Team Sep 2021 – Present
- Demonstrated proficiency in algorithms and C++ to three-times represent the University of Michigan at the ICPC.

Nintendo Entertainment System Emulator Project | *C++* Jun 2021 – Present
- Created fully functional NES emulator in C++ capable of playing genuine NES videogame ROMs.
- Emulated MOS 6502 CPU with NES PPU background/sprite rendering, RAM, cartridge ROMs and mappers.

Skills & Honors

Languages: C++, C, Python, Julia, Java
Libraries: Chromium, Libcurl, Tensorflow, Thrust, OpenCV, OpenGL, pwn tools, ZLib, Qt, Eigen, OpenMP
Technology: CUDA, Ghidra, AWS Lambda, DynamoDB, SageMaker, ROS, GDB
Honors: Sophomore Honors Award | University Honors 2021-24 | Eagle Scout, four Palms