

Alaric Hartsock

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Computer Scientist with experience working in a national lab. Experienced with Python and machine learning frameworks. Eager to get more involved with AI/ML and holistically learn and grow within software engineering.

EDUCATION

Oregon State University

Corvallis, OR

Bachelor of Science in Computer Science, 3.78 GPA (Magna Cum Laude)

Sep. 2019 – Sep 2023

- Applied focus of Cybersecurity
- Secretary of the OSU Linux User Group & OSU Hackathon Club
- Relevant Coursework: Cloud Application Development, Operating Systems I & II, Computer Architecture, Intro to AI, Intro to Security, Database Management Systems, Software Engineering I & II, Intro to Theory of Computation, Programming Language Fundamentals

EXPERIENCE

Post Bachelors Research Assistant

March 2024 – Present

Pacific Northwest National Laboratory

Richland, WA

- Improved front-end verification efficiency by implementing Cypress with 100% requirements-to-tests coverage
- Performed data engineering for an internal search engine to serve over 1.5PB of data with Apache Spark

Tech Intern

June 2021 - March 2024

- Developed machine learning models to visualize streaming Zeek data for threat hunters
- Generated critical visualizations with Plotly containing over 125,000 data points to represent continuous Zeek streaming cyber data
- Utilized high-performance computing clusters to train machine learning models down to a loss of $1 \cdot 10^{-12}$

Student Developer

July 2019 – Jun 2021

Oregon State University

Bend, OR

- Spearheaded a team developing multiple technical Python projects mission critical to a \$16.0M grant disbursement project affecting over 1,600 applicants in multiple counties
- Instructed peer Computer Science students in automating data integration processes utilizing Python scripting.
- Led and successfully delivered multiple web development and systems consulting projects, tailored for the unique needs of local small businesses

PROJECTS

Custom Network Attached Storage | *Linux, System Administration, Networking*

December 2020 – Present

- Built a headless NAS server with spare hardware
- Constructed a RAID array with 8 TB of storage space
- Implemented computer networking best practices to hook the NAS up to a local area network
- Wrote custom shell scripts to automate backups, organization, and pruning of old backup archives

Tarpaulin | *MongoDB, Mongoose, Node, Redis, Joi, Git*

Repository

- Implemented a CRUD backend for a Canvas Clone with a 4 student team
- Employed MongoDB and Mongoose to model structured data; used Joi to verify input data

SmallSH | *C, Linux, Git*

Repository

- Developed a shell that used system calls to create new processes and execute commands
- Implemented error handling and dealt with edge cases and race conditions

TECHNICAL SKILLS

Languages: Python, Typescript, C/C++, BASH

Databases: MongoDB, SQLite, MySQL, MariaDB

Developer Tools: Git, Github, Docker, VS Code, Vim

Libraries: Plotly, Pytorch, Pandas, NumPy, React