

Zach Taylor

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EDUCATION

Oregon State University

Bachelor of Science in Computer Science

September 2019 – June 2023

Corvallis, OR

EXPERIENCE

Software Engineer Intern *Rohde & Schwarz*

April 2024 – Jan 2025

- Enabled advanced **network analysis** for the U.S. Army, Tesla, and first responders by delivering custom scanning features and frequency band configurations designed, implemented, and integrated using **C++**.
- Achieved a **25%** improvement in processing speed and maintainability by redesigning programs with efficient **lookup algorithms** and modern library features.
- Ensured stability and reliability across multiple software components by uncovering edge cases through rigorous unit testing and debugging with **Google Test**.
- Led weekly meetings** and coordinated cross-functional efforts to drive team alignment and collaboration, ensuring adherence to the software development lifecycle.

Software Development Intern *Portland State University*

June 2019 – September 2019

- Achieved **97%** accuracy in object detection by implementing a model with **Python OpenCV** for image capture and leveraging **TensorFlow's** transfer learning APIs.
- Delivered a versatile image processing solution by configuring the model to handle both live camera feeds and static image datasets for real time and batch applications.
- Directed team planning** and streamlined project execution by managing weekly deliverables and fostering innovative problem solving through open collaboration.

Undergraduate Teaching Assistant *Oregon State University*

September 2020 – June 2023

- Strengthened students' foundational and practical skills by teaching **data structures** and **operating systems** in **C**, and guiding full stack web development using **JavaScript**, **Node.js**, and **HTML/CSS**.
- Raised academic performance by **30%** among struggling students by delivering personalized one-on-one and small group tutoring focused on reinforcing core concepts and addressing individual challenges.
- Improved students' **problem solving** abilities and debugging proficiency by walking through real code issues and encouraging a deeper understanding of troubleshooting techniques.

PROJECTS

Patient Monitoring Robot | *Python, OpenCV, ROS2*

[GitHub](#)

- Enhanced safety in nursing homes by achieving **96%** accuracy in detecting falls and abnormal movements through the development of a robotic monitoring system using **Python**, **OpenCV**, and **Linux**.
- Boosted system performance by **56%** and enabled seamless camera integration by overhauling a legacy ROS2 codebase to meet the latest framework standards.
- Verified software performance and accuracy across various settings through comprehensive field tests, utilizing real-time motion tracking to replicate typical user environments and edge cases.
- Drove team progress** across the development lifecycle by facilitating technical discussions, aligning objectives, removing blockers, and ensuring clear communication.

Personal Site | *TypeScript, Next.js, Vercel*

[Full Site](#)

- Developed a personal portfolio site using **Next.js**, **TypeScript**, and **Tailwind CSS**; deployed via **Vercel** for fast and simple hosting.
- Built modular components and custom sections to showcase projects, skills, and experience in a maintainable and scalable structure.

SKILLS

Languages: C++, Python, Golang, Assembly, Typescript, JavaScript, HTML, CSS, SQL, Verilog

Libraries/Frameworks: MFC, React, Node.js, Next.js, Tailwind, TensorFlow, CUDA, FastAPI, MySQL

Developer Tools: Git, Docker, Linux, Visual Studio, Jenkins, Google Test, AWS, Vercel, Microcontrollers