

## Experience

### Husky Robotics Lead Software Engineer

September 2023 – Present

- Elected Lead of the Software Team on Husky Robotics, led group of 11 programmers.
- Worked in conjunction with 7 related subsystems to enhance custom-made Mars Rover to compete nationally.
- Responsible for developing C++ Rover codebase, web-based control interface made with **React**, and **Unity** software for virtually simulator used for testing.

### Cartogram Software Engineering Intern

June – August 2021

- Hired to be a full-time software engineering intern for an indoor mapping company working to make traversing unfamiliar indoor locations easier by using Bluetooth beacons and software to create GPS-like interfaces that will guide users to internal locations.
- Worked on solving location drifting—when a user's location would become inaccurate over time; added smart movement checking (determining if user is standing still/walking/running), boosting accuracy by as much as 70%.

### FIRST Robotics (Jr. FLL, FLL, FTC, FRC)

September 2012 – June 2023

- Actively participated in FIRST WA robotics since the 2nd grade. Became increasingly proficient with multiple departments of robotics (software, engineering, documentation, communication).
- Titan Robotics Club (High School team, participates in FIRST challenges) *August 2019 – June 2023 (750+ hours)*
  - ✓ Software Lead (2021–2023): Led groups of 10-14 programmers per year in perfecting our robot's capabilities, helped more than 15 new members become acclimated to the FIRST program, created brand new projects to control and interface with retired robots, documented algorithms and won awards for software.
  - ✓ Software Team (2019–2023): Developed **Java** programming skills, learned a separate team library, created subsystem diagnostic **unit tests**, notated routines, aided with extensive fine-tuning.
  - ✓ Drive Team Coach (2021–2023): Communicated and led 4 other drive team members, who operate the robot during competitions, held practices up to 3 times a week for 2+ hours and strategy meetings with over a hundred other teams.

### TEXTILE (Tutorials for EXperimentalist Interactive LEarning)

June – August 2022

- Selected to be in the UW ChemE Disease Directed Lab (Nance Lab, PI: Elizabeth Nance) **Data Science Training Program**.
- Learned **Python**, data management, experimental design, and **image processing** alongside observing wet-lab techniques such as brain slicing and microscopy. Applied image processing and **machine learning** techniques to fluorescent brain cell images.
- Engaged in research skill workshops including how to read research papers, DEI and Ethics in Data Science Applied to Neuroscience, and career planning.

## Projects

### brAIInstorm

October 2024

- Full-stack web app that organizes users' thoughts in snippets of text and audio on a whiteboard and generates summaries and similar works for inspiration.
- Used OpenAI's **Whisper** trained on Intel's Tiber AI Cloud, leveraged Intel's AI PCs to tune and quantize our Multi-Modal LLM.
- Built backend on **FastAPI** with a RAG pipeline to push content to a **Perplexity** AI agent.
- Won UW's DubHacks' Intel-Sponsored AI Track for build cutting-edge AI applications with Intel-optimized software.

### Personal Website

June 2024 – Present

- Built from scratch using **React**, **Vite**, and **TypeScript** to showcase projects and demonstrate web-development skills.

### Webatro

June – September 2024

- Developed a full-fledged web-based video game from scratch using **React**, **Vite**, and **TypeScript**.
- Made extensive use of hooks and custom reducers to track game state

### Maze/Labyrinth Generator

June 2024

- Developed using **JavaScript**.
- Mazes generated using a randomized Kruskal's Algorithm and disjoint sets.
- Made to interface with a 2-D CNC machine to draw computed patterns.

### SafeScroll Chrome Extension

October 2023

- Extension that automatically blurs sensitive and potentially triggering content, including text and images.
- **Won** at UW's DubHacks Annual Hackathon out of **600+ contestants** for creative concept/name.
- Used **HTML**, **Tailwind CSS**, **JS**, and **JSON** for the extension & website, trained a **ML model** with **Python**.

## Education

### University of Washington

Seattle, Washington

- Bachelor of Science in Computer Engineering *Grad. June 2027*
- Notable Coursework: Data Structures and Parallelism, Operating Systems, Embedded Systems, Signal Conditioning, Systems Programming, Foundations of Computing II, Matrix Algebra.