

## Education

### University of Washington, Seattle

B.S. in Computer Science (Direct Admit) // UW Dean's List (AU22, WI24)

- **Related Coursework:** Machine Learning, Algorithms, Data Structures, Java

June 2022 – 2024

GPA: 3.77

## Research Projects

### Improving Model Robustness on OOD Data for Robotic Manipulation Tasks, UW CSE

- Training out-of-distribution (OOD) detection & handling models on real environments by designing & collecting unique tasks on Franka Emika robot arm.

June 2024 – Present

Rosario Scalise & Dr. Abhishek Gupta (PhD, UW CSE); WEIRD Lab & Robot Learning Lab UW

### Large Language Models for Medical History Generation, UW CSE, Stanford, UPenn

- Improved chief complaint embedding methods for clinical prediction tasks.
- Tested novel methods to improve LLM ability to take a relevant patient history.

Oct. 2023 – Sept. 2024

2024 International Conference of Health Informatics  
Poster @ 2024 GenAI4Health Workshop, NeurIPS  
2nd @ MD Plus Datathon on value-based care

### Improving Robotic Car Navigation Algorithms, UW CSE

- Built neural networks to train road-following model using PyTorch to probe whether robust training can be achieved with simulated data and less real data.

Sept. 2022 – May 2024

Alex Spitzer & Dr. Byron Boots (Overland AI, UW CSE); UW Robot Learning Lab

Presented at Undergraduate Research Symposium

### Augmented Reality for Physical Therapy, UW CSE, Foster, Medicine, BioEngr.

- Built prototype, designed business plan of immersive AR at-home PT technology.

Sept. 2023 – Feb. 2024

Presented at Final Round of Holloman Health Innovation Challenge 2024

### Repairing Brain-Computer Interfaces (BCI) with Fault-Based Data Acquisition (UW CSE)

- Evaluated novel BCI debugger that relied on focused data acquisition and data labeling using a cursor manipulation neural decoder application.

April 2021 – May 2022

Dr. Rajesh Rao & Dr. Rene Just (PhD, UW CSE)  
2021 Engineering in Medicine and Biology & 2022 International Conference on Software Engineering

### Assessing Neurostimulation as Therapy for Spinal Cord Injury

- Assessed efficacy of neurostimulation as therapy for spinal cord injury in rats by quantifying vasculature recovery in spinal cord images.

June 2021 – September 2021

Dr. Sarah Mondello, (PhD, UW Rehab Medicine); Restorative Technologies Laboratory

### ML-Based Neural Decoding

- Developed ML-based haptic neural decoders to improve object-handling neuro-prosthetics.
- Built ML-based system to predict distracted driving from EEG data.

Dec. 2019 – March 2021

Courtne Paschall (UW MD/PhD student)  
1<sup>st</sup> at WSSEF 2020, 2021; 2<sup>nd</sup> in Software Systems in 2021 CRSEF, US Air Force Award, 2020 Student Scholar Symposium (Sigma Xi)

### MyScoliCare (Android/iOS app)

- Developed app with a voice assistant for scoliosis patients; has 100+ users.

Nov. 2018 – May 2019

Endorsed by Dr. Manuel Rigo (MD/PhD, Barcelona Scoliosis PT School) Non-Operative Treatment of Childhood Scoliosis, Columbia University

## Work Experience

### Neurophys [Software Developer]

- Designing AI-based technology for smart at-home rehabilitation plans.

Aug. 2024 - Present

### Paul Allen School of Computer Science, UW [Teaching Assistant]

- Lead class groups (~30 students), office hours & 1-1s, and review sessions, etc.

Aug. 2023 - Present

### Banyan Computing [Backend Software Developer Intern]

- Built Julia script-saving system and software for managing AWS cloud spending.

June 2022 – Sept. 2022

Sept. 2021 – April 2022

## Publications/Conferences

Medical question-generation for pre-consultation with LLM in-context learning. *2024 GenAI4Health Workshop (NeurIPS)*.

Multimodal Clinical Prediction with Unified Prompts and Pretrained LLMs. *2024 International Conference on Health Informatics*.

Repairing Brain-Computer Interfaces with Fault-based Data Acquisition. *2022 IEEE/ACM 44th International Conference on Software Engineering*

A Review of Commercially Available EEG Headsets. *IYNA*. 2021; <https://youthneuro.org/journal/article/673/>

## Outreach/Volunteer

CS Education Week, UW [Speaker] – Presented my research to high school students.

Dec. 2023

NeuroTEC, UW [Digital Media Leader] – Managed digital media on neurotech topics.

Oct. 2021 – June 2023

CobraCoders.org [Co-founder] – Run outreach platform to inspire students in tech.

July 2019 – Present

Amazon Women in Engineering [Speaker] – Presented 3 tech talks to high-school students.

July 2019, Aug. 2020, Aug. 2021

The 5C's Ensemble [Composer/Flutist] – Perform ensemble music and release albums.

Oct. 2017 – Present

## Skills

**Programming Languages:** Python, Java, HTML/CSS, Julia, System Verilog, JavaScript, TypeScript, React

**Software Libraries/Tools:** AWS DynamoDB/CostExplorer, boto3, Scikit-Learn, NumPy, Pandas, PyTorch, Intel Quartus Prime

**Technical Skills:** ML, website/mobile app development, EEG analysis, data analysis, journal writing, reading scientific literature