Cleah Winston

☑ cleahw@uw.edu▲ github.com/cleahwin⋄ cleahwin.github.io

Education

University of Washington, Seattle

B.S./M.S. in Computer Science (Direct Admit) // UW Dean's List (AU22, WI24, WI25)

 Related Coursework: Machine Learning, Deep Learning, Computer Vision, Algorithms, Robotics, Data Structures

September 2022 – June 2026 (B.S.) September 2026 – June 2027 (M.S.)

GPA: 3.78

Research Projects

Improving Robustness of Imitation Learning on OOD Data using Offline RL, UW CSE

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

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.

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.

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

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

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.

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.

ML-Based Neural Decoding

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

MyScoliCare (Android/iOS app)

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

June 2024 – Present

Abhishek Gupta (PhD, UW CSE); WEIRD Lab & Robot Learning Lab, UW

Oct. 2023 - Sept. 2024

2024 International Conference of Health Informatics Poster @ 2024 GenAl4Health Workshop, NeurIPS 2nd @ MD Plus Datathon on value-based care

Sept. 2022 – May 2024

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

Presented @ Undergraduate Research Symposium

Sept. 2023 - Feb. 2024

Presented @ Final Round of Holloman Health Innovation Challenge 2024

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

June 2021 – September 2021

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

Dec. 2019 - March 2021

Courtnie Paschall (UW MD/PhD student)

June 2025 – September 2025

1st @ WSSEF 2020, 2021; 2nd in Software Systems @ 2021 CRSEF, US Air Force Award, 2020 Student Scholar Symposium (Sigma Xi)

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

Supio [Software Engineering Intern]

 Designing end-to-end platform with AWS orchestration layer for training intent classifiers with LLM-based data generation methods.

Neurophys [Software Developer]

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

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

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

Banyan Computing [Backend Software Developer Intern]

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

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

Aug. 2024 - Present

Awarded Best Idea Prize in Digital Health @ Holloman Health Innovation Challenge 2025

Aug. 2023 - Present

June 2022 – Sept. 2022

Sept. 2021 - April 2022

Oct. 2017 - Present

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.

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

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

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

July 2019, Aug. 2020, Aug. 2021

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