

Seyeon Park

Website | seyeon@uw.edu | [linkedin.com/in/parkseyeon](https://www.linkedin.com/in/parkseyeon) | github.com/yeonselily

EDUCATION

University of Washington

GPA: **3.75**

B.S. Computer Science and Software Engineering, Minors in Data Science and Music

Expected Aug 2026

- Leadership: Vice President, Inclusive AI; Officer, Association for Computing Machinery (ACM)
- Affiliations: TrickFire Robotics; Google Developer Group; Institute of Electrical and Electronics Engineering

EXPERIENCE

Software Engineering Research Assistant

Dec 2025 – Present

Autonomous Drone Systems Project

Bothell, WA

- Validated autonomous flight safety behaviors using Mission Planner (ArduPilot), testing Return-to-Home scenarios.
- Configured flight controllers and failsafe parameters to improve mission reliability.
- Developed autonomous deployment workflows migrating from SpeedyBee F405 to Matek H743 flight controller.
- Led cross-functional electrical and mechanical team to resolve hardware–software communication issues.

Computer Science & Math Tutor

Sep 2025 – Present

Quantitative Skills Center

Bothell, WA

- Improved student grades by **15%** for cohort of 35 through weekly tutoring in algorithms and data structures.
- Taught BFS, DFS, articulation points, sorting algorithms, and Huffman coding using Java, Python, and C++.

Undergraduate Researcher

May 2025 – Nov 2025

DAIS Lab

Bothell, WA

- Summer Research Fellow contributing to DeepTracer 3.0, a generative AI system for protein structure prediction.
- Evaluated diffusion-based prediction pipelines achieving **1.74Å RMSD** and **75% coverage**.
- Implemented HDF5 compression reducing dataset size by **20×** and improving training speed by **14%**.

Technical Research Intern

Jul 2025 – Aug 2025

Digital Scholar Program, School of IAS Lab

Bothell, WA

- Restored abandoned QuikChem 8500 analyzer by resolving valve and heater failures, achieving full functionality.
- Resolved Omnion software–hardware timing misalignment by reconfiguring channels, enabling stable 37 °C runs.
- Built SOPs, templates and automated CSV workflows for orthophosphate analysis, reducing processing time **30%**.
- Developed data visualizations presenting experimental findings on system restoration at STEM faculty meeting.

PROJECTS

Backend Data Pipeline for Agent-Based Simulations | *Python, C++, NumPy, JSON/CSV*

- Built Python-based data pipeline to parse and transform MASS CUDA simulation logs into structured datasets (CSV/JSON) for downstream analysis and visualization.
- Designed parsing logic to extract timestep, grid position, and state values from debug and simulation output.
- Defined standardized data schema enabling reusable workflows for scientific visualization and analysis.

Harmonique | *React, TypeScript, TailwindCSS, Tone.js, Meyda.js*

- Developed real-time audio analysis platform supporting emotion recognition pipelines using React architecture.
- Implemented speech emotion recognition using audio preprocessing and LSTM-based neural networks.
- Built Supabase SQL backend for storing and querying inference results.

Cultural Culinary Adventure | *React, PHP, MySQL*

- Built full-stack web application enabling culturally-based recipe discovery with dynamic filtering and relational database backend.
- Implemented filtering interfaces and relational database schema with secure prepared statements.
- Deployed application on Linux server using SSH, Apache, PHP, and MySQL.

TECHNICAL SKILLS

Languages: Java, Python, C++, SQL, JavaScript, TypeScript, PHP

ML/Data Science: PyTorch, NumPy, pandas, Matplotlib

Frameworks & Libraries: React, Node.js, TailwindCSS, shadcn/ui, Java Swing, Pygame

Databases: MySQL

Developer Tools: Git, GitHub, Bitbucket, Linux