Yuyang E. Lou

253-507-3966 • University Place, WA • evanlou@cs.washington.edu
LinkedIn • GitHub • Website

EDUCATION

University of Washington | Bachelor of Science in Computer Science — Expected Graduation: May 2026

SKILLS

Languages: Java, Python, C++, SQL, JavaScript, HTML/CSS
Libraries & Frameworks: Node.js, React, PostgreSQL, NumPy, OpenCV,
Tools & Technologies: AWS (EC2, Lambda, S3), Firebase, Junit, PyTest

WORK EXPERIENCE

Software Engineer Intern — May - September 2024
Fechii Fragrance & Flavors | Los Angeles, CA| Hybrid

- Led the development of ChromStation, a high-performance spectrometry data processing interactive system equivalent to Agilent's Mass Hunter.
- Applied signal processing and filtering techniques using Python, NumPy, and Pandas to extract feature from complex and noisy gas chromatography data.
- Linearly combined and leveraged algorithms such as weighted dot product and probability-based matching for efficient and accurate chemical substance identification.
- Developed a secure, scalable SQL database using PostgreSQL to manage and synchronize sensitive spectrometry library data, ensuring reliability and consistency across systems.
- Engineered ChromStation's front-end using React, Express, as well as incorporating continuous integration pipelines to ensure high availability and scalability.
- New Software increased the chemical report generation by 50%, from 120 minutes to 60 minutes.

Vision Team Member — September 2023 - Now
Advanced Robotics at University of Washington| Seattle, WA

- Maintained and contributed to a custom robot vision library for robot trajectory prediction and robot localization in annual Robomaster Competition North America
- Contributed to the training of an efficient, lightweighted, real-time objected detection model using ImageNet-50, targeted at adversarial robot plate detection.
- Implemented data filtering algorithms such as Particle Filter to predict and correct robot trajectory and orientation of adversarial robots, integrating both sensory data and vision cues.
- Refactored and debugged data pipeline in a high-pressure 24-hour competition environment, ensuring robustness and reliability under time constraints.

PROJECTS

ScanLite

- Engineered a portable, handheld 3D scanner that is capable of scanning and creating 3D models of object in real-time.
- Acquired pose estimation data from a 6DOF gyroscope sensor through Arduino serial port and running interactive closest point algorithm on a RealSense d415 depth camera.
- Applied Extended Kalman Filter to fuse the sensory data from gyroscope and the depth camera to effectively accommodate gyroscope drift and the slower computational time of ICP algorithm.
- Developed a front-end using python and Open3D for effective point cloud rendering and file exportation.

AWARDS & LEADERSHIP

USACO | Gold Division
Washington State Science and Engineering Fair | First Place Award
American Junior Academy of Science | Lifetime Fellowship Ward