

Dylan Liu

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EDUCATION

Oregon State University

Expected Graduation Jun. 2026

Bachelor of Science in Computer Science, Minor in Japanese – **(3.95 GPA)**

Relevant Coursework: *Object-Oriented Programming, Web Development, Analysis of Algorithms, Data Structures*

Professional Societies: *MECOP Student Advisory Board, OSU ACM Student Chapter, OSU SASE*

TECHNICAL SKILLS

Languages: C++, C, C#, TypeScript, JavaScript, Python, HTML/CSS, SQL

Frameworks: React, Node.js, Express.js, Vite

Developer Tools: Git, VS Code, Visual Studio, TortoiseGit, Beyond Compare, OpenGL, Google Scripts

Spoken Languages: English, Mandarin Chinese, Japanese

EXPERIENCE

Software Engineer Intern

Mar. 2025 – Sept. 2025

Garmin AT

- Pioneered a proof-of-concept **rehost simulator**, integrating a GTN avionics display inside flight sim software
- Implemented **real-time video streaming** in **C++/OpenGL** via memory maps, achieving **20 FPS**
- Achieved **full touch interactivity** by transmitting mouse input via named pipes, reducing input delays by **50 ms**
- Modernized the build pipeline by removing legacy C# Make dependencies from **45+ methods and interfaces**
- Extended projects across **UDP networked interfaces**, enabling GTN hardware to reflect flight simulator states
- Spearheaded **2 major projects** by **initiating collaboration** across **5+** engineering teams to ensure alignment
- Demonstrated leadership by organizing and leading company tours for **75 prospective interns**

Software Developer

Sept. 2024 – Feb. 2025

Asha Hope Amanaki

- Launched a bill-splitting app with Google Apps Script, automating **9 hours** of administrative work per month
- Designed and implemented a **user-centric interface**, resulting in a **100% user satisfaction rate**
- Documented code and created user guides to facilitate smooth onboarding and usage by non-technical users

Undergraduate Research Assistant

Apr. 2023 – Jun. 2024

Oregon State University - EPICLab

- Co-authored **2 academic papers**, both featured at separate **international academic conferences**
- Built a Python script to automate **10GB dataset** cleaning, reducing the team's data preparation time by **90%**
- **Led a project** to design an **engaging research website**, ensuring seamless functionality and aesthetic appeal
- Collaborated with research leaders, advisors, and professors across **5 distinct projects** and academic papers

PROJECTS

Spotify Harmonize | *Spotify Web API, Typescript, Vite, React, Node.js, HTML, CSS*

- Devised a **full-stack** web application using **Vite** with **React** as frontend, achieving a **30%** loading time reduction
- Deployed **Spotify OAuth** and **PKCE workflow** to enhance security and prevent authorization code interception
- Leveraged **React hooks** and optimized state management techniques, leading to a **20%** increase in responsiveness

Evenly | *Google Apps Script, JavaScript, HTML, CSS*

- Developed an application using **Google Apps Script** to automate bill-splitting for **10+ users**
- Engineered a responsive single-page interface with vanilla **JavaScript**, **HTML**, and **CSS** for cross-device usability
- Authored comprehensive **developer and user documentation** to ensure code maintainability and ease of use

National Collision Data Visualizer | *Python, Pandas, Plotly Express, Jupyter Notebook*

- Created a Python script with **Pandas** to parse and process **5000+** traffic fatality records from raw CSV data
- Constructed an interactive geospatial scatter map using **Plotly Express** to visualize incident locations in the US
- Scaled data points by color intensity based on fatality counts and customized the UI with **interactive hover data**

PUBLICATIONS

Debugging for Inclusivity in Online CS Courseware: Does it Work?

Aug. 2024

ACM Conference on International Computing Education Research (ICER) 2024

- Investigated using an Automated Inclusivity Detector (AID) tool to remove inclusivity biases in online CS courses

The Triumphs and Trials of Generative AI in Learning Software Engineering

Apr. 2024

ACM 46th International Conference on Software Engineering

- Evaluated ChatGPT's effectiveness in assisting software engineering students via a between-subjects study (N=22)