Lilymoon Whalen

Kirkland, WA • Linkedin • lw116@wellesley.edu • https://lilymoonws-portfolio.vercel.app

EDUCATION

Wellesley College – Wellesley, MA   **Sept 2023 –May 2027**
Cross registered at Massachusetts Institute of Technology - Boston, MA   **Sept 2024 –May 2027**
Bachelor of Arts in Computer Science and Psychology
- **Relevant Coursework:** Advanced Algorithm, Data Structures, Intermediate Web Development, Foundations to Computer Systems, Intro to Computer Vision, Modeling for Computer Systems, Introduction to Engineering,

SKILLS

- **Languages**: Java, Javascript, Python, PHP, C, HTML, Dart, Tailwind
- **Tools/Frameworks**: React, GitHub, Wordpress, BlueJ, Eclipse, Visual Studio Code, PyCharm, Flutter, FireBase, Electron, Flask, Figma, Canva

EXPERIENCE

Website Development Intern | Fertility Within Reach   **Feb 2024 – Present**
- Created dynamic graphs using **JavaScript**, prototyped **Figma** designs, created data visualization tools to enhance navigation to improve site readability, hosted on **GoDaddy**
- Designed **JSON** datasets to visualize fertility healthcare laws, exemptions, and initiatives across U.S. states
- Collaborated in development meetings and incorporated user feedback to **refine** website content and UI

Computer Science Teaching Assistant | Wellesley College   **Sept 2024 - Present**
- Facilitate weekly tutoring sessions for students, improving performance by 15%
- Grade assignments and exams for **50+** students and provide feedback on exam designs

Engineering Team Member | Formula SAE, Olin School of Engineering   **Jan 2025 – Present**
- Collaborate with cross-functional teams to integrate braking system with other vehicle subsystems
- Spearheaded the assembly of a high-performance hydraulic braking system for the Formula SAE vehicle

Founder | Serendipity   **May 2022 – Dec 2022**
- Launched a fundraising initiative, raised **$628** for the WEA Children's Fund by managing logistics, marketing and sales
- Developed a **website** using **SquareSpace**, integrating payment systems and optimizing user experience.
- Engaged the community through a baking workshop and was featured in Greet Magazine for the initiative's success.
- Enhanced messaging by designing custom packaging and product descriptions, driving user engagement and sales.

PROJECTS

Sugar & Focus (June 2025)
- Built a cross-platform Pomodoro timer using **React** and **Electron**

Remembering and Recognizing Emotions with β-VAEs (May 2025)
- Designed and **generated** an emoji-based emotion dataset with varying distributions to explore **entropy and bias**
- Extended the evaluation pipeline with **confusion matrices** and **reconstruction heatmaps** for deeper model insights
- Ran experiments on generated and real-world datasets using a modified **β-VAE**, documenting results in **paper**

SMT Word Adventure (May 2025)
- Built a full-stack application using **Z3** for formal verification and utilized **Flask** for dynamic frontend.
- Modeled logic-based word puzzles and enabled **real-time random generation** and rendering in a web interface

Harmony (Nov 2024) Won best education hack with interactive web app that makes piano lessons accessible
- Developed a system to transcribe audio recordings into notes using **PyAudio** and **Librosa** and compare them with MIDI-based sheet music using **Python** to calculate transcription accuracy.

RFID Scanner (May 2024)
- Implemented **C++** program for Arduino to manage **RFID** authentication and **I2C**-controlled door actuation
- Designed precision gear rack using **Onshape** CAD software, optimizing door-opening mechanism efficiency

Wellesley Housing Selector (Jan 2024)
- Scraped and **processed** complex PDF data using **Python**, transforming raw information into a structured database
- Designed and implemented **Java** data structures to manage information, automate categorization, and handle users

Publications

Relative Impact of Family Income vs. Per Student Expenditures on Education Outcomes in Washington   August 2022