Olivia Jardine

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EDUCATION

University of Washington | B.S. in Discrete Math & Algorithms | GPA: 3.5/4.0 **Expected Graduation: June 2027**
Relevant Coursework: Data Structures & Algorithms (Python & Java), Algorithm Engineering (C++), Discrete Math, Linear Algebra
Member: Interactive Intelligence – Neuroscience/AI

TECHNICAL SKILLS

Languages: Python, Java, C#, C++, TypeScript, JavaScript, HTML/CSS, Bash, SQL, JSON
Frameworks/Libraries: .NET, React, Next.js, Node.js, Tailwind CSS, FastAPI, Pandas, NumPy, Matplotlib, Scikit-learn
DevOps & Tools: Azure, SQL Server, PostgreSQL, Firebase, Docker, Git, Vite, Visual Studio, PyCharm, Tableau, Figma

WORK EXPERIENCE

Software Engineer Intern **Apr. 2025 – Present**
King County (private contract) *Seattle, WA*

- Rebuilding a legacy extranet web application supporting regulatory compliance for over 90k residents and 1,000+ businesses annually, managing end-to-end full-stack architecture, security, and deployment workflows.
- Engineer secure system components using C#, ASP.NET Core MVC, and SQL Server, implementing role-based access control and symmetric key encryption to safeguard sensitive environmental and personal data across storage and transmission layers.
- Collaborate with King County Information Technology members to interpret and embed public-sector security policies into system design, producing clear documentation and integrating legal data handling requirements to maintain full compliance.

Software Engineering Mentor **June 2025 - Present**
CodePath *Remote*

- Mentor students through resume reviews and feedback to strengthen applications for software engineering internship roles.
- Conduct mock technical and behavioral interviews for Web, Android, iOS, and software engineering tracks, assessing coding skills, system design, and communication with a focus on code quality and problem-solving.

PROJECTS

Electric Vehicle Charging Analytics | *FastAPI, Next.js, React, PostGreSQL, Scikit-learn* GitHub

- Built full-stack EV charging analytics platform using FastAPI backend and Next.js frontend with PostgreSQL/Redis stack, implementing 4 ML models (duration prediction, cost optimization, demand forecasting, user clustering) that analyze charging patterns and optimize infrastructure planning through automated recommendations.
- Automated ML pipeline with data validation, feature engineering, and model retraining capabilities using Scikit-learn/Pandas, processing vehicle characteristics and environmental factors to predict charging durations and costs while enabling peak demand forecasting for grid optimization.

Shoplifter Detection System | *Python*, *FastAPI, YOLOv8, OpenCV, PostgreSQL, Docker* GitHub

- Developed real-time computer vision surveillance system processing 30 FPS video (~33ms/frame) using Haar cascades, HOG detection, and scikit-learn ensemble models (Random Forest + Decision Tree) for behavior analysis and confidence scoring.
- Designed surveillance dashboard with live video streaming, people counting, and alert management using FastAPI backend with automatic OpenAPI documentation and dark theme UI optimized for 4GB+ RAM systems.
- Engineered detection algorithms with 20% IoU threshold overlap detection and 50% containment checking to prevent duplicate counting, using aspect ratio filtering and contrast analysis validation to reduce false positives while maintaining 640x480 resolution at 85% JPEG compression quality.

Node Flow | *TypeScript, Tailwind CSS, React, Vercel* GitHub

- Built an interactive web platform to visualize 20+ core data structures and algorithms, supporting 120+ students and self-learners in grasping foundational computer science concepts through real-time, animated visualizations.
- Achieved sub-0.7s load times using Vite, lazy loading, and performance optimization techniques.

CERTIFICATIONS

Neuroscience/Artificial Intelligence (Prof. of Neuroscience, UW)