Megan Pereira

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Education

University of Washington - Seattle **Seattle, WA**
Bachelor of Science in Computer Science & Economics *Expected: Jun. 2027*
Related Coursework: Data Structures & Algorithms, Software Design and Implementation, Artificial Intelligence, Machine Learning, Systems Programming, Linear Algebra

Technical Skills

Languages: Java, Python, TypeScript, C++, JavaScript, HTML/CSS
Frameworks/Tools: React, Node.js, Flask, Docker, AWS EC2, Git, Google Cloud Build
Core Competencies: Full-Stack Development, API Design, CI/CD Automation, OOP, Software Testing (JUnit)

Experience

Husky Coding Project, University of Washington **Seattle, WA**
Project Technical Lead *Oct. 2025 – Present*
- Spearheading a 6-member team to design a mobile application using React Native and Express.js, implementing an RPG-style program to dynamically manage complex user progression and community-driven goal synchronization.
- Engineering the end-to-end full-stack integration and established automated CI/CD pipelines using industry standard workflows to ensure seamless, error-free feature deployments and high code reliability across all subteams.
- Optimizing project delivery by facilitating technical sprint reviews and translating high-level feature requirements into actionable documentation, ensuring system components meet performance and scalability benchmarks.

Synaptech, University of Washington **Seattle, WA**
Software Developer *Sep. 2025 – Present*
- Developing a Python-based desktop application that interfaces with Muse EEG sensors to dynamically adjust work/break cycles via real-time neural signals, resulting in a 40% increase in measured user focus duration.
- Performing deep signal analysis on 500+ biometric sessions to correlate neural patterns with productivity models, applying weak-signal detection principles to filter environmental noise from high-fidelity brainwave data.
- Implementing modular desktop features and automated testing pipelines to refine early-stage software versions, utilizing version-controlled releases and rigorous debugging to reduce manual quality assurance time by 30%.

Husky Satellite Lab, University of Washington **Seattle, WA**
Reaction Wheels Software Engineer *Jan. 2025 – Aug. 2025*
- Engineered a high-speed wireless communication bridge utilizing ESP32 microcontrollers and a Python-Arduino serial passthrough system to support live, low-latency data streaming for critical satellite subsystems.
- Built a real-time visualization dashboard using Flask and Plotly to monitor high-frequency quaternion, RPM, and PWM data, optimizing internal data pipelines to ensure high fidelity during rigorous laboratory simulations.
- Collaborated within a multidisciplinary engineering team to validate total throughput and optimize data pipelines, ensuring maximum operational reliability and performance stability in high-stakes simulated environments.

OpenExa **Bellevue, WA**
Software Engineer Intern *Aug. 2023 – Jun. 2024*
- Led a 5-member development team to architect and build a full-stack financial dashboard using Next.js and Kanban methodologies, significantly improving asset management efficiency for internal stakeholders.
- Leveraged Google Gemini API and BigQuery to optimize complex SQL query efficiency by 40%.
- Automated cloud deployment pipelines via Google Cloud Build, reducing release cycles by 70% and ensuring the rapid, scalable iteration of core financial dashboard features in a production-ready environment.

Project

MarketBeacon React, Express, Finnhub API
- Developed a full-stack stock-alert system achieving sub-5s latency and 98% uptime
- Optimized asynchronous REST endpoints to support 500+ concurrent requests with minimal overhead.
- Implemented observability using Prometheus/Grafana for performance monitoring and the ELK stack for centralized logging, enabling rapid diagnosis of production incidents.
- Implemented TypeScript front-end validation and unit tests (Jest), increasing code coverage from 70% to 95%.
- Deployed to AWS EC2 using Docker + CI/CD for scalable cloud deployment and end-to-end ownership.