Violet Monserate

Seattle, WA | violetmonserate@gmail.com | (425) 970-5779 | https://github.com/ctrl-vi | https://ctrl-vi.github.io/

Software Development Intern @ INIT SE and Computer Engineering & Philosophy: Ethics student excited about hardware, robotics, accessibility, and computer vision. Track record of collaborative development, from software to CAD. Extensive experience as a STEM educator in primary and secondary schools.

Skills

Hard Skills: Java, C/C++/C#, Python (NumPy, Pandas, TensorFlow, Flask), ROS, Linux, JS/TS, HTML/CSS, SQL, Git, React, Vue.js, Next.js, Vite, Verilog, Solidworks, Altrium

Soft Skills: problem-solver, detail-oriented, creative, adaptive, fast learner, concise documentation, time management

Education

University of Washington-Seattle, Computer Engineering & Philosophy: Ethics | **3.96 GPA**   *09/2023 - 06/2027*

Computer Science: Data Structures/Algorithms, Systems Programming, Hardware/Software Design, Databases, Computer Security, Probability for Computing, Digital Design, HCI, Autonomous Robotics

Philosophy: Computer Ethics, Intro to Logic, Philosophy for Children, Intergenerational Ethics, Neuroethics

Raisbeck Aviation High School, High School Diploma | **4.0 GPA**   *09/2019 - 06/2023*

Projects

Rover Remote Control UI- JavaScript, React, Vite, Cesium, C++, Git | Husky Robotics Team   *10/2023 - Present*
- Write React widget to track position, heading, and path of rover against a 3-D topographical map with Cesium
- Develop back-end server to deliver glTF tiles with a RESTful URI to operate without an internet connection
- Improve rover controls, telemetry, and pathing, updated and delivered through React Redux

Mobile Manipulator- CAD, Onshape, ROS2, Python | WEIRD Lab, Paul G. Allen School   *03/2024-09/2024*
- Designed networking and physical mobile platform utilizing a holonomic drive base and two 6-DOF robot arms
- Received mentorship from advisor and graduate students within the WEIRD Lab

Robot Codebase- Java, Python, C++, Git | Phoenix Force Robotics   *09/2021 - 07/2023*
- Deployed and unit-tested kinematics and path planning for holonomic robot movement and 3-DOF robot arm
- Won Industrial Design Award for custom computer vision system to track fiducial markers and game pieces

Climate Crisis: A Nation in Peril- HTML, CSS, JavaScript | Class Project   *04/2024*
- Developed a choose-your-own-adventure game with numerous conditional events with 6 different endings
- Tested and iterated through custom UIs with Vanilla JavaScript

Experience

Software Development Intern- INIT SE | Seattle, WA   *06/2025 –present*
- Develop RESTful endpoints utilizing GET/POST methods in Oracle REST Data Services and implement workflows to onboard clients utilizing OAuth 2.0
- Install Automatic Passenger Counter demo unit within office, documenting details and BOM using Word and Excel

Teaching Assistant- University Of Washington-Seattle | Seattle, WA   *08/2024 – 06/2025*
- Develop lesson plans and facilitate lectures of >50 people while adjusting to achieve active learning
- Grade student work to provide constructive feedback and guide student growth and improvement

STEM Alternative Spring Break Instructor- University of Washington CELE | Seattle, WA   *01/2025 - 05/2025*
- Developed ~5 hours' worth of culturally competent STEM education for 6th-8th grade students with peers
- Taught and built relationships with ~60 students for 1 week in a rural community in Northeast Washington

Mentor- Changemakers in Computing @ University of Washington-Seattle | Seattle, WA   *01/2024 - 08/2024*
- Collaborated with coworkers to develop and teach a 4-week curriculum about web development (HTML, CSS and JavaScript) and tech ethics to a group of ~40 high school students from underrepresented backgrounds

Coding Instructor- Coding with Kids | Redmond, WA   *06/2023 - 08/2024*
- Designed curriculum for >450 primary school students and integrated coding into interdisciplinary projects
- Maintained 90% retention, and positive feedback from 95% of parents and guardians

Scholar- Apple & Kode with Klossy | New York, NY   *06/2022 - 08/2022*
- Learned best practices for AI and Machine Learning to create app that identifies and sorts recycling
- Presented the AI app to an audience of >400 in Apple 5th Ave @ NYC, including AI engineers