**Violet Monserate**

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Incoming 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.

**Education**

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

Math: calculus III, linear algebra, differential equations

Computer Science: computer security, statistics/probability for computing, data structures/algorithms, systems programming, databases, digital design, HCI, hardware/software design, autonomous robotics

Philosophy: intro to logic, philosophy for children, intergenerational ethics, neuroethics, computer ethics

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

**Projects**

**Rover Remote Control UI**- Git, JavaScript | Husky Robotics Team             *10/2023 - Present*

* Writing 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, ROS, 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-** Git, Java, Python, C++ | 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 | Game Jam Submission                                                 08/2024

* Developed a choose-your-own-adventure game with numerous conditional events with 6 different endings
* Developed and iterated through custom UIs with Vanilla JavaScript

**Experience**

**Teaching Assistant-** University Of Washington-Seattle | Seattle, WA                           *08/2024 - Present*

* Develop lesson plans and facilitate lectures of ~50 people with instructor
* Gauge student engagement and adjust to ensure 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 multidisciplinary STEM content 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 curriculum about web development (HTML, CSS and JavaScript) and tech ethics to a group of ~40 high school students
* Managed program website in HTML and JavaScript

**Coding Instructor-** Coding with Kids | Redmond, WA                 *06/2023 - 08/2024*

* Designed curriculum for >450 primary school students and integrated coding into interdisciplinary projects
* Accommodated diverse skill levels, learning styles, and special needs
* 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

**Skills**

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

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