Gregory Jabido

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EDUCATION

Washington State University <div align="right">Pullman, WA</div>
Bachelor of Science in Mechanical Engineering, Minor in Electrical Engineering <div align="right">*Aug. 2023 – May 2028*</div>

EXPERIENCE

FRC 4512 - Otter Chaos Robotics Design Team Member, Safety Captain <div align="right">2019 - 2023</div>
Cascade High school <div align="right">*Everett, WA*</div>
- Managed mechanical design process and trained underclassmen on generating mechanical drawings using Fusion 360.
- Secured the world title in the 2021 season of the FIRST Robotics Competition - INFINITE RECHARGE.

Palouse RoboSub CS Team Member <div align="right">2024 – Present</div>
Washington State University <div align="right">*Pullman, WA*</div>
- Developing autonomous underwater vehicle (AUV) to inspect WSU's TRIGA nuclear reactor.
- Mounted various electronics onto breadboard for AUV powered by Intel NUC.
- Developed and integrated a ROS 2 Jazzy based underwater robot simulation using a customized version of UUV Simulator.

WSU Robotics Club CS Team Member <div align="right">2025 – Present</div>
Washington State University <div align="right">*Pullman, WA*</div>
- ROS Developer for Quadruped Robot "Marshall"
- Developed and integrated inverse kinematics for quadruped walking gait using the CHAMP/CHVMP quadruped locomotion framework, enabling stable and efficient locomotion control.

PROJECTS

Verilog Projects | *AMD Vivado, Verilog*
- Developed a stopwatch and calculator using Verilog, utilizing a Xilinx ZYNQ XC7007S MPSoC processor, a seven-segment display, switches, and push buttons for implementation. Designed and integrated core stopwatch functionalities. Implemented arithmetic operations through binary and bitwise computations.

React Chess Engine | TypeScript, React, HTML5 Canvas, CSS Modules
- Developed an interactive chess engine in React and TypeScript featuring full rule enforcement (pawn promotion, en passant, check detection), object-oriented move validation through a centralized Referee class, and a dynamic drag-and-drop interface with DOM-based tile snapping for real-time gameplay responsiveness.

Autonomous Differential Drive Vehicle | *ROS2 Jazzy, XML, Gazebo Harmonic*
- Developed an autonomous differential-drive vehicle using the ROS2 Jazzy framework within the Gazebo Harmonic simulator, including teleoperation via Linux terminal and integration of a camera sensor for environmental perception.

Turtlesim Autonomous Navigation | *Python, ROS2 Jazzy*
- Designed and implemented a "Catch Them All" simulation utilizing ROS 2 Jazzy framework and Turtlesim packages. The simulation deploys an autonomous turtle object capable of dynamically navigating and capturing targets within a defined two-dimensional environment.

TECHNICAL SKILLS

Languages: Java, C/C++, C#, Python, Rust, JavaScript, TypeScript, CSS, Nodejs, Verilog, ARM Assembly, XML
Developer Tools: Git, Visual Studio Code, Visual Studio, JetBrains IDEs, Eclipse, Qt Creator, Unity Editor, OpenCV, Jupyter Notebooks, React, Robot Operating System (ROS), Gazebo simulator
Software: Fusion 360, SolidWorks, Siemens NX, Vivado, Vitis, KVM/QEMU, VirtualBox, LTSpice, Cadence
Operating Systems: Proficient in Windows, MacOS, Linux, and Unix systems
Certifications: Meta React Basics (Credential ID: 3W2712AK2MKZ), Robotics Backend - ROS2 for beginners (Credential ID: UC-917fa757-d06c-47ac-b199-4fcdf0ad311b), FIZ Soldering Certification
Coursework: Electronics, Microprocessor Systems, Electric Circuits I-II, Digital Logic Design, Advanced Data Structures, Differential Equations, Calculus I-III, Discrete Math, Linear Algebra