TYLER WADEKAMPER

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SUMMARY

- Results-oriented avionics engineer with a passion for software development.
- Versatile experience includes embedded and full-stack software, hardware design as well as program management.

SKILLS

- C/C++, Linux, Bash, Python, HTML, CSS, JavaScript, Ruby on Rails, PostgreSQL, Git, Docker.
- Outstanding knack for problem-solving, excellent communication and collaboration ability, consistent hunger to learn new technologies and concepts.

PROFESSIONAL EXPERIENCE

Electrical Engineer   **2019 - Present**
Astronics Advanced Electronic Systems, Everett, WA

- Wrote native Linux software in C to test avionics digital I/O circuit cards in embedded systems.
- Automated data security testing with Bash scripts, reducing touch time by 80% in manual test and saving an average of 30 minutes of production time per unit.
- Developed an automated browser tool with Python that streamlined configuration management tasks for engineers.
- Designed multi-protocol I/O cards for embedded military applications with USB, PCIe, Ethernet, and avionics functionality.
- Defined the processor board architecture for the next-generation avionics converter product, weighing the costs and benefits of processors, memory and Ethernet chip-down solutions.
- Implemented the first avionics protocol board that passed DO-160 level 4 lightning injection on all I/O inputs as well as high temperature operation at 70C with short term operating at 85C.
- Executed comprehensive testing and documentation of embedded products to DO-160 environmental and electrical standards.
- Managed a mid-scale program to create single protocol avionics cards for a lab environment. Led a team of 8 to meet requirements, schedule, and budget constraints during unprecedented design process challenges.

PROJECTS

KidCal – Source   **2023**

- Built a smart scale for babies with a Raspberry Pi, HX711 ADC, and load cells to view real-time weight on the web.
- Wrote a streaming app in C to read raw weight from the HX711 and open a websocket to stream it to the front-end.
- Created a React front-end that receives, converts and displays the data for network viewing on mobile or desktop.

FBRULES – Live | Source   **2022 - 2023**

- Constructed a social networking site for football officials where users can share rules questions and answers using Ruby on Rails, which handles the MVC framework and database integration.
- Utilized Bootstrap, JavaScript, and CSS to complete the fully-responsive front-end.
- Implemented an end-to-end test suite, RESTful architecture, and secure user authentication system.

Ruby Chess – Live | Source   **2022**

- Created a fully-featured command line chess game using object-oriented design in Ruby.
- Completed extensive Rspec test coverage using a hybrid test-driven development strategy from the outset.
- Deployed the program in a docker container in order to isolate the shell environment and minimize dependencies.

RetroCalc – Live | Source   **2022**

- Designed a calculator application that handles multiple lines of input, decimals, and memory that is styled like an original gameboy. The project consists of HTML, CSS, and JavaScript.
- Developed a state management engine that handles all calculation and text manipulation procedures.

EDUCATION

Bachelor of Science, Electrical and Electronics Engineering   **2019**
Seattle Pacific University, Seattle, WA

COURSES

The Odin Project   **2021 - 2022**

- Finished the self-guided web development curriculum over the course of a year, culminating in the completion of multiple full-stack projects