AARON RITO

EDUCATION

Bachelors of Science
Oregon State University
Major: Electrical and Computer Engineering, September 2018
Minor: Computer Science, December 2018.

Associates of Applied Science
Portland Community College
Major: Electrical Engineering Technology, June 2015. Focus: Robotics

EMPLOYMENT HISTORY

Embedded Engineering Team Lead – Geotab, Denver CO. January 2022- present

Lead a team of developers from new hire to senior and lead developers/Architect. Team focus is low power platforms for asset tracking. 6 direct reports. Certified SCRUM lead. Project management. Collaborate with executive leadership on projects and planning. Architecture and requirements for NPI's, career building. Diversity and belonging program leadership.

Embedded Engineer – Geotab, Denver CO. November 2020 – December 2021

MSP432, STM32 custom HAL, UBLOX gps, custom unit testing frameworks, technical team leadership, Gitlab, Jira, NuttX.

Firmware Engineer - PRO1 Technologies. Boulder CO, March 2019 - November 2020

FreeRTOS, Git, Atlassian/Jira/Bitbucket/Confluence, SAMD, SAML.
Algorithm analysis, bug repair, board bring-up/burn-in, automated testing, AtmelSTART, peer review and team programming, AGILE.

Electrical, Software, and Firmware Engineer - Sinnhuber Aquatic Research lab. OSU, 2015-2019

Linux, QT, pyQT, Jet brains IDEs (pycharm, clion) OpenCV, ROS, ROSpy, Msproject, Asana, Python, C++. Atmel Studio, Altium Designer, EAGLE,
Stepper motor control, brushless pump control, LCD menu programming, Computer vision, schematic capture, PCB layout, custom footprint design, project management, purchasing.

Project Highlights:
The "Shuttlebox Behavioral System" is a multi-station behavioral experiment
that tests Zebrafish reactions to light and current. My role was to develop new software, a hardware revision and expansion, update the firmware, and I also provided user documentation for the new system.

The "Eggdicator" is a computer vision system that evaluates Zebrafish embryos
at the very early stages of life. The machine replaces the task of hand sorting freshly harvested embryos. My role in the project was to design the PCB, develop the firmware for the mechanical systems, develop the GUI, and I was the Project Manager of the three student team.

The "Dechorionator" a first of its kind machine that removes the outer shell from
a Zebrafish embryo. This product is fully operational in the field at both SARL and the US

Army Center for Environmental Health Research. My role was to develop the firmware for the machine. I was also responsible for creating the final user documentation.

Electronics Technician - Rose City Pinball. Portland, Oregon. 2015.

Internship. Assisted staff in repair and maintenance of pinball machines from all eras. Trained staff on board level component testing. Used schematics and electrical test tools to troubleshoot.

SKILLS

Experience designing and producing analog and digital circuitry:

Interpreting and creating engineering drawings, schematics, and other technical documents. Circuit design, simulation and electronics theory. PCB design and assembly. Troubleshooting and repair. Proficient in using electrical test equipment not limited to: digital multi-meter, digital oscilloscopes, and soldering tools.

Excellent programming skills:

Adaptive and flexible to learning new languages and development environments quickly. Proficient in programming/debugging all brands of C based micro-controllers. Experience programming on multiple platforms (Windows/Linux) and in mixed languages such as mixed Python/C. Experience programming in ladder logic and GUI assisted development in LabVIEW, RsLogix. Graphical User Interface design and PC based hardware control with QT/pyQT and Python. Strong multithreading skills. FreeRTOS, NuttX OS.

Software tools:

QT Designer/QT Creator, Altium Designer, EagleCAD, CircuitMaker, Choregraph, Solidworks, AutoCAD, LTSpice, ROS/ROSpy, STCube, PyCharm/Clion/JetBrains, ADS, RSlogix5000, Netbeans, Microsoft Visual Studio, Atmel Studio, Xilinx IDE, Arduino/Teensyduino IDE, Linux/UNIX, Matlab, Windows, LabVIEW, Mac OS, Microsoft Office, Apache Open Office, Adobe Suite, Sonor Producer, Audacity, Ableton, Logic, VSDC video editor.

Programming languages:

Python, C, C++, QT/QML, pyQT, Assembly(AVR), VHDL, Verilog, Bash, MatLab, Scilab, Numpy, ROS/ROSpy, NuttX, FreeRTOS,

Hobbies and Interests:

Music performance and production, audio engineering, competitive pinball, guitar, bass, cycling, snowboarding, painting and sculpture.