Adam Rizkalla

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SUMMARY

Experienced Embedded Software Engineer with a demonstrated history of developing and shipping products in the consumer electronics and robotics industries. Skilled in Embedded Systems, C/C++, Python, Object Oriented Design, Test Infrastructure, and Debugging. Strong engineering professional and self-starter. Enjoys working on challenging embedded systems applications for new and exciting products, preferably in a start-up environment with large ownership of projects.

EDUCATION

California Polytechnic State University, San Luis Obispo, CA *September 2007 – June 2012*
B.S. Computer Engineering, Physics Minor
President's List, IEEE-Eta Kappa Nu (HKN)

SKILLS

Programming Languages: C/C++, Python, Bash, Go, Java
Architectures: x86/64, ARM, FPGA, PIC/dsPIC, AVR
Drivers: Serial (SPI, I2C, UART, CAN), USB, Bluetooth/BLE, ETH/Wi-Fi, Camera, Motor Control

Operating Systems: UNIX/Linux, Embedded Linux, ROS, FreeRTOS
Applications/Platforms: CI/CD, Docker, Ansible, AWS, GCP, Git, Altium

EXPERIENCE

JUUL Labs, San Francisco, CA

Senior Software Manager, Tools and Infrastructure *July 2021 – Present (1 year, 4 months+)*
- Manage a team of engineers to maintain and build new software tools for all aspects of the test automation platform
- Manage a small team of engineers for firmware QA efforts
- Work closely with product, regulatory, and quality teams for validation and software updates of test fixtures used for device production

Staff Software Engineer, Infrastructure *October 2020 – July 2021 (9 months)*
- Maintained test automation tools and infrastructure used across the product/hardware organization
- Led and mentored a small team of engineers on creating tools for developers to utilize the testing platform
- Assisted in integrating test platform with other fixtures designed for companion device hardware

Senior Software Engineer, Infrastructure *April 2019 – October 2020 (1 year, 6 months)*
- Joined a new team within the hardware organization aimed at building a modular, in-house product testing platform
- Collaborated with electrical, firmware, platform, and mobile teams on system design architecture and specifications
- Developed custom tools/software for hardware control, test automation, CI/CD, and data acquisition/visualization
- Developed and maintained an embedded linux OS and containerized applications for custom platform hardware
- Developed test automation scripts for manufacturing, firmware regression, mobile regression, and reliability testing
- Collaborated with manufacturing, hardware, and firmware teams to fix issues on device production line and increase UPH
- Collaborated with data teams to help develop analytics and produce insights/trends from manufacturing and in-house testing data

Kindred AI, San Francisco, CA

Firmware Engineer *January 2018 – April 2019 (1 year, 3 months)*
- Led firmware development and scoping efforts for custom hardware in B2B robotics product
- Built and managed testbed for firmware QA and test automation used in CI/CD workflow
- Managed firmware release and deployment process
- Scoped and implemented embedded requirements for R&D projects, working cross-functionally
- Assisted with PCB design for test and prototype hardware
- Assisted with robotics software development for device integration with main systems (ROS, Docker, etc.)

Juicero, San Francisco, CA

Firmware Engineer *May 2015 – October 2017 (2 years, 5 months)*
- Designed and developed firmware for embedded devices (including Wi-Fi) in home kitchen appliance
- Built and executed test automation scripts for firmware
- Scoped and implemented product requirements/features, working closely with hardware, software, and UX design teams
- Designed and developed firmware for life-cycle testing, working closely with mechanical and food science teams
- Assisted managing firmware release and deployment processes in a small team

Emotiv, San Francisco, CA
Software/Firmware Engineer   *September 2012 – May 2015 (2 years, 8 months)*
- Maintained firmware for existing products
- Designed and developed firmware (including BLE 4.0 & USB) for all products
- Assisted with hardware design of new products
- Managed software testing of beta and pre-release software
- Managed RMAs for repair, replacement, and upgrade services
- Managed technical related support tickets to troubleshoot issues
- Led informative webinars on SDK usage with 50+ attendees

Software Engineer – Intern   *June 2012 – September 2012 (3 months)*
- Designed and developed a music application that uses EEG data as input for song selection

Tapestry Solutions, a Boeing Company, San Luis Obispo, CA
Software Engineer – Part-Time   *August 2011 – May 2012 (9 months)*
- Assisted in development, design, and debugging of cargo/freight load-planning software for the U.S. military

Collaborative Agent Design Research Center, San Luis Obispo, CA
Student Software Developer   *April 2011 – August 2011 (4 months)*
- Assisted in development and debugging of cargo/freight load-planning software for the U.S. military

PROJECTS

Rapid Battery Exchange for Electric Vehicles (RBX)   *January 2011 – June 2012 (5 months)*
- Worked in a team to prototype a rapid battery interchange system for an electric GMC G-Van
- Designed and implemented controls and communication hardware/software

iPad RFID Sleeve   *September 2011 – March 2012 (6 months)*
- Designed an iPad compatible sleeve with a team of 5 for Perceptive Development Inc.
- Led embedded hardware and iOS application development to read RFID tags and NFC chips

SHPE Conference Undergraduate Design Competition (3rd Place)   *August – October 2010 (2 months)*
- Designed a robot that promotes outdoor activity for children in a team of 6 cross-functional engineers
- Developed a remote-controlled automated jump rope apparatus with music player
- Presented prototype at SHPE Conference 2010 in Cincinnati, OH