Khaled ALJayyousi

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CAREER PROFILE

Embedded software engineer with 3 years' experience developing Internet of Things (IoT) devices. Developed innovative IoT systems currently in the market.

Skilled in embedded systems software development (ARM architecture, C/C++, Python, Linux, TCP/IP), electric circuit analysis, Bluetooth low energy, and automation.

CAREER HIGHLIGHTS

- Developed firmware for two products currently in market
- Engineered the embedded part of an automated product production machine
- Designed and implemented multiple sensor data collection system for user behavior analysis

PROFESSIONAL EXPERIENCE

LifeFuels, Inc. Reston, VA   *October 2019 – December 2020*

LifeFuels empowers people to reach their hydration goals via a three-part hydration system comprising a smart bottle, flavor concentrates, and a mobile app.

Embedded Systems Engineer

- Engineered an embedded control system for a flavor concentrate filling machine, utilizing microcontrollers, scopes, logic analyzers, motors, and load cells
- Implemented a custom firmware debugging tool using Python in a Linux environment, capable of debugging microcontrollers via JTAG and Bluetooth
- Developed multi-product real-time firmware in C, employing a wide variety of sensors and microcontroller peripherals like: UART, SPI, I2C, PWM, timers, etc
- Enabled wireless communication between a smart bottle and mobile phones using Bluetooth 5.0
- Developed a computer vision solution to infer liquid volume in bottles from pictures using Python

Subol Products Design. Doha, Qatar   *March 2018 – October 2019*

A startup company that protects homes from gas leakage via a security system called Samam. The Samam system consists of two devices: a gas sensor and a gas valve shut off unit.

Embedded Firmware Engineer

- Developed and tested Firmware code in C for the Samam system to reach a minimum viable product status
- Aided in calibrating the gas sensing device by making a gas flow control rig
- Soldered surface-mount and through-hole electronic components onto printed circuit boards accelerating circuit board prototyping
- Enabled wireless communication between a gas sensor and a valve actuator via Bluetooth 5.0
- Managed the assembly process of the first 100 units of Samam system locally assuring product quality for early adopters

EDUCATION

Qatar University, Doha, Qatar   _2014 – 2018_

    B.S. with Honors in Electrical Engineering