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📍 Seattle, WA

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EDUCATION

Bachelor of Science in Computer Science

University of Washington, Seattle, WA
Graduated: June 2016

SKILLS

- Firmware Development (C, C++)
- Real-Time Operating Systems (RTOS, ThreadX)
- Embedded Hardware Integration
- Memory Management and Optimization
- Device Drivers and Bootloaders
- Wireless Communication Protocols (BLE, Zigbee, Wi-Fi)
- Debugging (Logic Analyzers, JTAG, UART)
- Security Best Practices in Firmware

DAVID PATEL

FIRMWARE ENGINEER

PROFESSIONAL SUMMARY

Detail-oriented Firmware Engineer with 9 years of experience developing low-level firmware for consumer electronics, medical devices, and industrial products. Expertise in embedded systems, real-time software, and hardware-software integration.

EXPERIENCE

● January 2020 - Now

Firmware Engineer

Amazon Lab126 / Seattle, WA

- Design and develop firmware for Amazon's smart home devices, including Alexa-enabled products.
- Work on bootloaders and firmware upgrades to ensure reliable and secure software updates.
- Integrate hardware peripherals such as sensors, motors, and cameras into embedded systems.
- Optimize firmware for memory usage and boot time, achieving a 20% reduction in power consumption.

● June 2016 - December 2019

Firmware Engineer

Medtronic / Minneapolis, MN

- Developed embedded software for critical medical devices, ensuring compliance with FDA regulations.
- Implemented real-time communication protocols for remote monitoring of devices.
- Optimized firmware for performance and safety, including memory management and fault tolerance.
- Conducted extensive testing and validation to ensure the firmware met industry safety standards.

CONTRIBUTIONS

● - 2024 / Published in Embedded Systems Design Journal

Optimizing Firmware for Low-Power Devices

- Authored a paper detailing methods for reducing power consumption in embedded systems while maintaining processing speed.