Mark Dodd

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Summary

Experienced software engineer, keenly interested in developing new consumer products. Offers expertise in hardware, firmware and software design, engineering processes, project management and regulatory compliance. Strong analytical and problem-solving abilities with a track record of tackling complex technical challenges and finding efficient solutions. A results-driven team player who is equally effective working in a leadership position or as part of a group of professionals committed to a common objective.

Experience

Head of Engineering
Woosh Air

Jan 2022 - Present

- Responsible for the entire tech stack (mobile app, device hardware, firmware and cloud infrastructure).
- Manage all engineering employees across globally dispersed teams.
- Researched, developed and coded Woosh's proprietary predictive analytics – a core revenue driver.
- Established the technological roadmap from inception; currently building out second generation hardware and a three year technological roadmap.
- Owned FCC compliance testing and delivered scalable manufacturing test solutions for production lines.

Languages

- Fluent: C++, C, Python, Java
- Proficient: C#, Node.js/Javascript
- Experienced: Dart, VHDL, Verilog
- Frameworks: AWS, Android SDK/NDK, Alexa Voice Service, Alexa Skills Kit, .NET, Node.js, Flutter, Flask

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Senior Software Engineer
Amazon

Aug 2016 - Dec 2021

- Technical lead for Local Voice Control in the Alexa Auto SDK, drove the initiative across eight teams including ML Science and engineering.
- Designed and delivered offline support for Callisto – Alexa embedded inside the Artemis I space capsule.
- Architected Local Hosted Skills (offline support for on device skill execution).
- Responsible for local skill SDKs and acting as the Engineering lead with external clients (BMW) for the product.

Technologies

- MCUs/CPUs: ARM, x86, 6800, 68000, PIC16, PIC18
- Wireless: Bluetooth/BLE, Wi-Fi, ZigBee, NFC
- OS: Windows, Linux, Android, iOS, MacOS
- Other: Automotive Infotainment

Senior Software Developer
Ecobee

Mar 2014 - Aug 2016

- Team lead for the Carrier Côr smart thermostat firmware.
- Acted as the engineering point of contact for external clients. Collected requirements and coded proprietary GUI/APIs necessary to implement proprietary algorithms and desired user experience.
- Designed/implemented Alexa Voice Service stack.
- Developed software for and oversaw Wi-Fi compliance testing.

Education

B. Sc., Computer Engineering
Minor in Business
University of Manitoba
Graduated with Distinction

Engineering Consultant
Detection Innovations
Feb 2013 - Apr 2014

- C# client/server system with an SQL database, Python based ZigBee mesh network and a PHP website front end.

US Patent

8,401,543

Design Engineer
Avvasi
May 2011 - Feb 2014

- Wrote APIs and drivers to access low level hardware facilities including I2C busses, EEPROMs and Ethernet controllers.

Projects

- RaspberryPi based automated beer brewing system
- Jeep Wrangler CAN bus manipulation

Software Developer
BlackBerry
May 2007 - May 2011

- Developed complete post assembly test solutions for multiple BlackBerry smartphones from prototype through end of life.