Bob Adams

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SUMMARY

Electronics engineer with 14 years of experience in the automotive industry performing tasks including schematic entry, PCB layout, project management, and failure analysis. I have a wide range of experience across product lines from fuel pump controllers to seat modules to camera systems.

PROFESSIONAL EXPERIENCE

Principal Electronics Engineer / Hardware Project Lead

ZF Group, Farmington Hills, MI *2022–Present*

- Lead hardware engineer for Smart Camera plant support group (level 3 warranty analysis and semiconductor PCN assessments at the camera PCBA level).
- Lead core hardware (mechanical, optical, electrical) team in the design of 3MP and 8MP satellite camera variants for forward and surround view systems.
- Responsible for core hardware validation recommendations for PCN-impacted smart camera projects.

Senior Hardware Engineer

Pi Innovo / Dana (acquisition), Plymouth, MI *2016 – 2022*

- Technical lead for the M130 OpenECU gateway product. Tasks included schematic design, PCB layout, worst case circuit analysis, and DV testing (internal and at environmental/EMC labs).
- Responsible for identifying, rolling out, and training the hardware team on tools for centralized component management (Altium Vault) and worst-case circuit analysis (Smath Studio).
- Supported the development of electronic brake modules, hybrid control modules, and assorted test infrastructure.

Hardware Engineer (Owner)

Mutant Electron, Novi, MI *2016*

- Sole proprietorship created to work on schematic and PCB design for small clients with Altium Designer.

Hardware Engineer

Hella Electronics Corporation, Plymouth, MI *2012 - 2016*

- Led the development of a DC fuel pump controller (PWM control) as a Tier 2 for an Asia Pacific customer. Performed schematic design, circuit analysis (MathCAD), and requirements review.
- Developed prototypes for sensor-less position measurement of Memory Seat Modules (ripple count).

Engineering Co-op

Takata, Pontiac, MI *2009 - 2012*

- Supported the airbag control unit group for development of new controllers including prototyping circuits, bench testing, and verifying DFMEA documentation.

EDUCATION

Bachelor of Science in Electrical Engineering, 2012
Kettering University, Flint, MI

PROJECTS, PUBLICATIONS, & CERTIFICATIONS

- Article: Hardware Thrashers of X, 0x01 – “Goals of Automotive Electronics”
- Heisenboard Chameleon – Open-Source Automotive Controller running Rust-based TockOS
- Functional Safety Certified Automotive Engineer (FSCAE), TUV, 2015-2018 (expired)
- Photon Automation training in Laser Welding Technology

TOOLS

- Altium Designer (incl. Vault), KiCad, LTspice, SMath Studio, Python, Rust