Noah Bergman

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Relevant Work Experience

Altec Industries — St. Joseph, MO
Controls Engineer — 2016 - Present

- Successly designed 12” x 6” circuit board with mixed digital and analog circuitry and approximately 300 components.
- Coordinated with CM to meet budget goals and improve manufacturability.
- Developed automated test harness with CAN datalogging capabilities.
- Tested designs to meet industry standard EMI/EMC and environmental specifications: ISO ... EN...
- Low-power firmware design to maximize battery life.
- Lead designer for datalogger board with high-speed eMMC, USB 2.0, and super-capacitor back-up power.
- Created breakout board for debugging, which later became integral to project development on datalogger.
- Extensive use of Altium, Solidworks, Autocad, Draftsight, SVN, MPLabX, CANape, and CANking.

Altec Industries — St. Joseph, MO
Electronics Manufacturing Engineer Co-op — 2015

- Identified more than $70,000 in annual savings while leading cost events.
- Lead Rapid Continuous Improvement event to develop effecient surface mount manufacturing equipment layout.
- Resolved significant component quality issue after initiating testing and coordinating with vendor.

ETG Electronics Shop — Ames, IA
Shop Assistant — 2014 - 2016

- Developed and tested labs for TI’s TIVA C series ARM-M4 processor in C.
- Designed remote datalogging device with LCD UI, navigation buttons, Real-Time Clock, and ADC Module.

PCB Piano — Personal Project, 2017

- Designed custom circuit board in KiCAD with capactive touch interface, piezo, speaker, accelerometer, and LiPO charger, and USB 2.0
- Developed library management standards for personal components in Github.
- Wrote custom firmware in C/C++ for SI Labs 32-bit MCU.

Heads - Up - Display for a Manufacturing Microscope — Honeywell - Senior Design, 2015 - 2016

- Successfully integrated heads-up display that overlayed the work instructions inside of miscroscope to improve manufacturing process.
- Researched and designed custom optical solution to integrate and focus display inside the field-of-view.
- Design custom 4-layer circuit board with HDMI, 24-bit RGB, and I2C databusses.
- Custom software for MSP430 to interface with HDMI and DLP display driver.
- 3D printed several bracket variations to meet demands of client.

Capacitive - Touch Rubik’s Cube (LED Cube) — Personal Project, 2014–2015

- Collaborated with team to design a 10cm x 10cm circuit board cube with 2-D capacitive touch and 648 led channels.
- Worked with software engineers to incorporate TI-RTOS on the MSP432.
- Collaborative software development in C/C++.
- I2C, SPI, USB 2.0 connected peripheral devices and debugging applications.
- Worked on schematics and layout in Multisim / Ultiboard.

Education

Bachelors in Electrical Engineering — Ames, IA
Iowa State University of Science and Technology — 2011 - 2016