Lawrence J. Bolan

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EDUCATION

Purdue University, New Albany Indiana
Electrical Engineering Technology, Bachelor of Science (May 2015)
GPA: 3.40/4.00 – Dean's List and Semester Honors – Fall 2012, Fall 2014

WORK EXPERIENCE

Premium Retail Services: Team Lead and Electronic Display Technician — 06/11 – Current
- Team leader over teams of 2-6 merchandisers on overnight store resets
- Liaison between individual stores and product manufacturers

ActionLink: Merchandiser and Electronic Display Technician — 10/12 – 6/15

Purdue University College of Technology- New Albany: Lab Monitor — 07/14 – 05/15

TECHNICAL PROJECTS

Senior Capstone Project: Design of Power Electronics Hardware and Embedded Controller for Inductive Casting Machine
- Reverse engineering of legacy hardware for Inresa S-300 Inductive Casting Machine via electrical test and measurement.
- Re-design and implementation of power electronic controller for defunct/outdated hardware.
- Design and implementation of ATMega328 feedback controller for switched phase control.

Other Major Projects
- Electronic Safe: Atmel AVR controlled electronic safe, with multiple levels of security
- Digitally Tuned FM Radio: Superheterodyne FM radio, AVR tuned with LED numeric display.
- Grid Following Robot: AVR controlled robot with IR sensing and Bluetooth.
- PID Controllers: Motor speed control via digital (AVR) and analog (OP-AMP)

SERVICE

IEEE
- Member — 2014 – Current
- New Albany Student Chapter Branch Chair — 2014 – 2015

FIRST Robotics Competition
- Member of Harrison Boiler Robotics — 08/07 – 07/10
- Member of Engineers of Tomorrow — 07/10 – 07/11
- Engineers of Tomorrow: Electrical sub-team captain — 07/10 – 07/11
- FIRST Dean's List Semifinalist- 2010
- Event Volunteer — 03/12 – Current
- Publications (Chiefdelphi.com Whitepapers): You Can do CAN Bus: CAN Bus on a Budget- January 2011, Window Motor Lockups: Causes and Solutions- May 2012

SKILLS
- Controls: Allen Bradley and Automation Direct PLC programming, PID control theory, robotics
- Embedded Programming: Atmel AVR
- Programming Languages: C, LabVIEW, MATLAB/GNU Octave
- Electrical Design: DC/AC circuit design and analysis, signal processing, RF communications, digital electronics, serial interfaces, PCB design
- Electronic Assembly/Repair: thru-hole soldering, SMD soldering, hot air rework
- Hardware: spectrum analyzer, RF signal generators, vector network analyzers
- General Computing: computer hardware repair/troubleshooting, Linux, MS Windows
- Software: MS office, LibreOffice, KICAD, AutoCAD, GIMP, Inkscape
- Other Skills: automotive repair/modification, machining, welding (SMAW, MIG, TIG)