ZACHERY **LITTELL**

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PROFILE

- Enthusiastic individual with self-motivation, working to company's highest standards
- Teamwork comes easy and enjoys working with all personalities
- Initially gained technology skills through self-taught subjects in computers and electronics
- Enjoys the process of designing products, from brainstorming to implementation

EDUCATION

- Microchip Masters in Phoenix Arizona ('17, '18, and '19)
- Purdue North Central, BS in Electrical and Computer Engineering Technology ('09 to '13)
  - with courses in Microcontrollers, PLCs, Analog Network Processing, DSP, and FPGAs
- Electronics Vocational Course, Porter County Career and Technical Center ('07 to '09)
  - graduated with Technical Honors, placed top 4 in Skills USA two years in a row.

EXPERIENCE

Electronics Design Engineer, *Task Force Tips / Amkus Rescue Systems ('17 to '20)*

Developed products while taking input from management and sales staff to shape requirements. Designed schematics, PCBs, and developed firmware to implement features requested from the field. Worked with assembly staff to write documentation and create fixtures for production. Assisted in development of mobile apps to interface with Bluetooth devices that I had designed. Researched high pressure hydraulic systems and worked to launch newly developed battery powered rescue tools.

Process Control Engineer, *US Steel ('12 to '17)*

Maintained a large network of PLCs and HMI/SCADAs. Developed ladder logic to implement new features based on customer needs. Worked with support staff to troubleshoot operation issues. Developed requirements for new processes and projects. Utilized Lean Six Sigma to manage project success. Fostered a great relationship with contractors to ensure jobs were done to specifications and on time.

MANAGEMENT CAPABILITIES

- Project design and management skills that include working with contractors
- Customer relation skills to provide features that bolster their ability to sell product
- Experience working in an organized stage gate product development environment
- Worked directly with company board members to shape the direction of future products

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HOBBIES

- Co-Founded PNC's EVRC (Electric Vehicle Research Club) with the purpose of building an electric Go-Kart to race in Purdue's evGrandPrix
- Developed a wireless data logger that utilized an XBee, LCD screen, CAN bus, TI Cortex M4F ARM processor, and an SD card in order to communicate with other subsystems and log data.
- Reverse engineered USB protocol used by XBOX360 controllers and created an open source library to emulate the controller on PCs.
- Developing USB HID products to change the way we interface with technology.

SKILLS

- Developed and maintained PLC logic for advanced control systems using Allen Bradley equipment such as SLC, PLC5/250, PLC5, and ControlLogix
- Created and managed HMI systems using GE iFix and Allen Bradley PanelViews
- Server management for license distribution, SQL based alarm logging, etc.
- Experience with data acquisition systems running OSI PI (PI2 and PI3)
- Used scripting languages (Batch, PowerShell, and Python) to automate repetitive tasks
- Created custom applications in the various .NET languages (Visual Basic and Visual C#)
- PCB layout in Altium Designer and Cadence Orcad
- 3D modeling in Inventor, Fusion360, and SolidWorks
- Designed mechanical parts, as well as created prints, for manufacture
- Embedded C/C++ programming (with a specialty in Microchip PIC)
- Python and C scripting on embedded Linux SOC
- USB HID device and companion PC app development
- Some experience with Xamarin mobile app development with a focus on Bluetooth connectivity
- Wrote code in an environment that practiced Test Driven Development and CI/CD
- Experienced GIT user, department GIT power user and implemented our standards for maintaining firmware repositories
- Developed PCBs that passed ESD requirements
- Bluetooth device development using PIC microcontrollers and various Bluetooth modules
- Portable devices based on the DEWALT FLEXVOLT battery platform
- Acquired and assembled prototype PCBs as well as ordered complete prototype PCBAs
- Managed PCBA vendors giving them correct revision output files, delivery date expectations, receiving quotes, handling mishaps, and requesting/delivering updates to management
- Managed the production of custom engineered products from China based firm from prototype to production