Jonathan Bayless

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Fourth year undergraduate electrical engineer seeking full-time employment in the fields of Electrical Engineering or Software Engineering. Particular interest in controls systems, embedded systems, and robotics.

Education

Purdue University **Expected Graduation: May 2019**
Bachelor of Science in Electrical Engineering, Minor in Organizational Leadership *GPA: 3.3/4.0*

Employment

Rolls-Royce Corporation
Electrical Test Engineering Intern *May 2017–August 2017*

- Designed and implemented new controls algorithm to improve performance over PID; patent currently pending
- Created VBA tool for parsing .ini config files into Excel sheet for collaboration with mechanical teams
- Developed time calculation and risk assessment software tool for engine servicing and repair
- Lead a team of 12 engineering interns in updating facility database

Rolls-Royce Corporation
Electrical Test Engineering Intern *May 2016–August 2016*

- Built PLC hardware and validated PLC programming for engine test stands
- Validated signal configuration for European test stands in QNX based HMI software
- Upgraded computer hardware and created Ethernet-linked satellite HMI station for air facility control

LAWNServ of Central Indiana
Lawnmower operator *June 2014-August 2015*

- Maintained and operated a Zero-turn lawnmower, planned routes, and upheld positive company image

Leadership Experience

Purdue ACM SIGBots
President, Vice President *April 2016–April 2018, April 2018–Present*

- Designed mechanical systems, sensor integration, and controls systems development for semi-autonomous robots
- Developed a generalized feedback control library for utilizing a variety of algorithms with VEX robots
- Implemented the Particle Swarm Optimization algorithm for generating PID constants for robotic subsystems
- Participated in kernel development of an RTOS (PROS) for Arm Cortex M3 and for Arm Cortex A9
- Built the documentation site for PROS with Sphinx. Heavily modified the existing Sass theme to fit requirements

Association for Computing Machinery
President *April 2018–Present*

- Coordinated team meetings and events, handled team finances and maintained relationships with sponsors
- Led four Special Interest Groups (SIGs) in areas of App Development, AI, Robotics, and Game Development

Technical Skills

Programming Languages: Proficient in: C, C++, MATLAB, VBA
Intermediate ability with Python, Shell scripting, HTML5, CSS, Javascript, Sass

Software Skills: QNX/Unix/Linux environments, Git, LTSpice, LaTeX, CATIA, Autodesk Inventor/Fusion, Microsoft Office, Allen Bradley/Modicon PLC programming, Phabricator, Agile/Kanban methodologies, Adobe Illustrator

Other: Soldering, MIG welding, plasma cutting, 3D printing, Wood shop equipment, CNC

Involvement and Honors

- Alpha Phi Omega Service Fraternity
- Phi Eta Sigma Honor Society
- Purdue Presidential Scholarship
- Purdue Electrical Engineering Scholarship