Jonathan Bayless

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A well-rounded software developer focusing on IOT devices with a background in electronics and controls systems.

Employment

Carrier Corporation
Software Engineer, Scrum Master - Next Gen Thermostats   *Jan 2021–Present*
– Worked with Systems and Product Marketing teams to create the hardware and software design to achieve product market fit
– Let the development of a shared software platform to increase code sharing across thermostat, furnace, and AC equipment
– Introduced team to Scrum and started Standup, Retrospective, and Sprint Planning Processes

Carrier Corporation
Software Engineer, Scrum Master - Wall Controls   *May 2019–Dec 2020*
– Led Sprint Planning Meetings, Daily Standups, and Retrospectives as Scrum Master to maximize team productivity
– Ensured on time release of feature complete Wall Control support for the top-tier, highest-efficiency-in-market Heat Pump
– Led team of 20 in a transition to a version control process that improved dev productivity and aligned better with business goals
– Resolved defects and new feature tickets at highest velocity in team

The Boeing Company
F15 Mission Processing Software Infrastructure Intern   *May 2018–August 2018*
– Added support for new systems and communication protocols to improve coverage of existing logging systems
– Revamped RTOS frame analysis tool to aid in threading use and prevent mission-affecting overframing

Rolls-Royce Corporation
Electrical Test Engineering Intern   *May–August 2016, May–August 2017*
– Designed and implemented new controls algorithm that improved performance over PID
– Created VBA tool for parsing .ini config files into Excel sheet that became standard for collaboration with mechanical teams

Education

Purdue University   **Graduated May 2019**
Bachelor of Science in Electrical Engineering, Minor in Organizational Leadership

Project Management Institute   **July 2020**
Agile Certified Practitioner

Side Projects

auToDo
Co-Founder   *2019 – Present*
– Led marketing campaigns, SEO efforts, and customer engagement for cross-platform car maintenance tracking app
– Built backend authentication, database management, and business logic with Django and PostgreSQL
– Built web client on React with Redux for state management and mobile client on Flutter

Purdue ACM SIGBots
President, Vice President   *2016 – 2019*
– Developed a variety of Kalman Filters, PID controls, path planning, and odometry for mobile robots
– Placed 1st in World Competition Rankings and 4th in the World Programming Skills
– Increased users of team's RTOS/Dev Environment from 200 to 2000+ as kernel developer and UX/API designer
– Developed bare-metal firmware in C for Cortex M3 and Xilinx Zynq micros to provide RTOS and drivers for sensors and motors

Association for Computing Machinery
President   *2018 – 2019*
– Led four Special Interest Groups (SIGs) in areas of App Development, AI, Robotics, and Game Development

Technical Skills

Programming Languages (Proficient): C, C++, Python, MATLAB, Dart, Javascript
Programming Languages (Knowledgeable): C#, Ada, Arm Assembly, Sass, Typescript, Kotlin, Swift, SQL, Ruby, CSS
Technologies: QNX/Unix/Linux, Git, CI/CD, IBM Rational (DOORS), Bash, Docker, PostgreSQL, ElasticSearch, CMake
Frameworks: Django, NodeJS, React, Redux, Flutter, ROS, Gatsby, Jekyll
Other Software Skills: LTSpice/NGSpice, KiCad, CATIA, Autodesk Inventor/Fusion, Adobe Illustrator
Controls Skills: Kalman filtering (EKF/UKF), State Space control, AI autotuning for PID, Pure Pursuit, Spline path planning