Jonathan Bayless

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

Employment

Carrier Corporation
Graduate Hire Program - Firmware Developer, Scrum Master   *May 2019–Present*
– 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
– Supported recruiting efforts by interviewing candidates and acting as Ambassador for Grad Hire Program in Indy office
– 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
– Rewrote Ada parser for flight test messages in Python to support new message spec and cut technical debt
– Fixed bugs in build scripts and test environments

Rolls-Royce Corporation
Electrical Test Engineering Intern   *May–August 2016, May–August 2017*
– Designed and implemented new controls algorithm that improves performance over PID
– Created VBA tool for parsing .ini config files into Excel sheet that became standard for collaboration with mechanical teams
– Validated signal configuration for European test stands in QNX based HMI software

Education

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

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

Ancillary Projects

auToDo
Co-Founder, CEO   *2019 − Present*
– Created a cross-platform mobile application with Flutter for tracking routine car maintenance tasks
– Led marketing campaigns, SEO efforts, and customer engagement to grow user base
– Used Firebase for auth and NoSQL db in prototype and migrated to Django + PostreSQL for production environment

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

Association for Computing Machinery
President   *2018 − 2019*
– 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): C, C++, Python (Django), MATLAB, Dart (Flutter)
Programming Languages (Knowledgeable): C#, Ada, Arm Assembly, (S)CSS, Javascript/Typescript/NodeJS, Kotlin, Swift
Technologies: QNX/Unix/Linux environments, Git, CI/CD, IBM Rational (DOORS), SQL (SQLite, PostgreSQL), Bash, Docker
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