

Jonathan Bayless

✉ me@jonathanbayless.com • 🌐 <https://jonathanbayless.com>

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
- Led the development of a shared software platform to increase code sharing across thermostat and HVAC equipment
- Introduced team to Scrum and started Standup, Retrospective, and Sprint Planning Processes
- Led transition of team to Git, AWS, and Atlassian tool suite (JIRA)
- Developed new state management solution for distributed embedded hardware system by porting Redux to embedded C++

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

Bachelor of Science in Electrical Engineering, Minor in Organizational Leadership

Graduated May 2019

Project Management Institute

Agile Certified Practitioner

July 2020

Side Projects

auToDo

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, Mentor

2016 – Present

- 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 40,000+ as kernel and editor developer
- Developed bare-metal firmware in C for Cortex M3 and Xilinx Zynq micros to provide RTOS and drivers for sensors and motors

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, AWS, Firebase, Bazel, Jira/Confluence

Frameworks/Libs: Django, NodeJS, React, Redux, Flutter, ROS, Gatsby, Jekyll, Eigen, Protobufs, Cython

Controls Skills: Kalman filtering (EKF/UKF), State Space control, AI autotuning for PID, Pure Pursuit, Spline path planning