Drew Bowler

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EDUCATION

University of Massachusetts Lowell, Lowell, MA — May 2021

Bachelor of Science in Computer Engineering – Magna Cum Laude — (3.52 GPA)

SKILLS

Programming: Python, MATLAB, Lua, Django, HTML/CSS, Javascript, React.js

Software: Linux (Raspbian, Debian, Fedora), LabVIEW, xPedition, SPICE, XFdtd, G-code, Git CLI, FreeCAD

Hardware: Raspberry Pi, Oscilloscope, FPGAs, Power Management, Motion Control, Arduino, I2C/SPI, UART

WORK EXPERIENCE

Product Industrialization Engineer | Philips Healthcare — Jun 2021 – Present

Cambridge, MA

- Increased test report parsing efficiency and reduced runtime by more than 80% by reverse-engineering legacy LabVIEW scripts and rewriting in Python
- Managed critical test network software by writing and scheduling SQL database sorting using PowerShell scripts to speed up global share-drive data collection
- Supported an emergency CAPA effort by collecting, parsing, and interpreting data to prove compliance

Computer Engineer Co-Op | Geophysical Survey Systems, Inc. (GSSI) — Jan 2020 – Jun 2020

Nashua, NH

- Designed a three-axis motion control test platform from scratch by using a Python script to convert user-drawn paths to coordinates over a socket to a Lua microcontroller to test 3D radar antennas
- Created a MATLAB algorithm to categorize and index 2D slices of 3D electromagnetic simulations to avoid re-simulating existing data, reducing test time from up to a full day down to several minutes

Test Engineer Co-Op | Philips Healthcare — Jan 2019 – Aug 2019

Andover, MA

- Reduced signal noise in a test platform by 97% by deconstructing a two-layer PCB, applying signal noise reduction principles, and creating a new eight-layer PCB to increase testing confidence
- Led an initiative to write original design verification testing (DVT) by coordinating with global engineering teams to draft specifications resulting in worldwide adoption of the new PCB interface
- Eliminated thousands of dollars in monthly rental costs for an outdated function generator by developing tests for cheaper alternatives and writing C# code to integrate them into automated testing

PROJECTS

Personal Website – https://drew-bowler.com/: — Apr 2022

- Designed a REST API personal development portfolio using Django and React.js to host projects

Bridgewell Visual Timer — May 2021

- Modified an ABV plastic enclosure using FreeCAD and 3D printing for handheld use
- Developed a Python app on single board computer and modified Linux Debian kernel to decrease boot time

Raspberry Pi Cyberdeck: — Apr 2021

- Modeled a 3D printed panel to attach a screen, RasPi 4B, and a 14,000 mAH supply to a Pelican case
- Added features such as retro game emulation, network-wide DNS-level adblocking, and PC streaming