Julian Coy Loiacono

Electronics Engineer

julian@codecollective.us | 410.258.7550 | https://juliancoy.us

Summary:

I'm an Electronics Engineer experienced with Microcontroller, Arm Cortex, FPGA and GPU programming. Also experienced with Kicad and Altium Electronic Design Assistance (EDA) tools. Familiar with modern web development. Expert level Python developer. I currently organize Code Collective with the intention of building a strong Baltimore economy.

Work Experience:

Arkavo

Platform Engineer, November 2024 - Present

- Developed a secure messaging full stack, like Signal or Slack, in collaboration DevOps Columbia
- Our stack: Python, React, Docker, AWS, Go, Keycloak, OpenTDF, NGINX

Bike Powered Events

Electronics Engineer (Part Time), July 2022 - Present

- Designed and built the bike-powered Rainbow Rider, and others on the Bike Powered Events website
- Usually using C++ on microcontrollers, Python, OpenSCAD, GLSL, WGSL (GPU language)
- Hand–soldered units assembly-line style
- Reviewed business cloud tools

Code Collective

Organizer, September 2024 - Present

- Developed the Baltimore Tech Events calendar to bring tech people together
- Planning Tech Unity to build the relationships vital to a strong local economy
- Experimenting with novel ways to communicate across language barriers
- I offer a short certification program in GitHub, to get people started on collaborative coding

Intel

Database Administrator II, Aug 2023 - Oct 2023

- Assessed DDR5 RAM programatically

Code and Coffee (Baltimore)

Co-Organizer, May 2023 - September 2024

- This is where I learned the skills necessary to run a tech meetup
- Ensured the success of bi-weekly Saturday meetups

Reality AI

Lead Electronics Engineer, March 2020 - Nov 2021

- Developed AI algorithms for microcontrollers in C and C++ for Arm Cortex, Infineon, and more
- Developed a successful SaaS backend, in the run-up to the company's acquisition
- Used Git and Github heavily. Standardized their use at the company. Used Jira

dragontech

Electronics Engineer | May 2016 - December 2022

- This item represents several PCB projects I developed on my own in Kicad
- zynqPCB : A project which I open-sourced in 2021. It was originally designed to be a hardware synthesizer. I abandoned this project due to complexities in Xilinx Zynq SoC development, and moved the algorithms first to Python, then to Web. 8-layers board with DDR. This is the successor to an earlier project which used Xilinx Artix FPGA
- Bracelite: My most successful PCB to date. A flexPCB worn about the wrist, with bright colorful LED patterns and a long-lasting lithium-ion battery. Looks great at events! C++ micro development (STM32)
- Wand project: A meter-long 2-layer high-power PCB Leviwand (wand light). I abandoned this project due to structural infeasibility and quality control issues
- I produced these projects at PCBWay. I debugged these projects using infrared imaging for finding short-circuits, oscilloscope for analyzing digital data, multimeter for finding open-circuits, and GDB for debugging embedded code

Equinox Corporation

Electronics Engineer, November 2018 - February 2020

- Developed high-performance embedded systems and worked on a complex 14-layer HDI PCB with two FPGAs and two microcontrollers.
- Performed other signals-related development

Education:

B.S. Computer Engineering, 2016
University of Maryland, Baltimore County

Online Coursework

Sociological

University of Amsterdam Classical Sociology (2023)
UC Davis Computational Social Science (2022)
scrum.org **Professional Scrum Product Owner I (PSPO) (2023)**

Medical

University of Maryland Genes and the Human Condition (2024)
Johns Hopkins University Genomic Data Science Specialization (2024, too boring didn't finish)
Massachusetts Institute of Technology Affiliates - CITI Conflicts of Interest
Massachusetts Institute of Technology Affiliates - Data or Specimens Only Research

Computational

Stanford University Machine Learning (2018)
DeepLearning.AI TensorFlow Professional Certificate (2022)
AWS **Solutions Architect Associate (2023)**
Google Site Reliability Engineering (2023)
UC Davis SQL Basics for Data Science (2023)
Stanford University Audio Signal Processing for Music Applications (