Brian Hill

703-946-1545 | hillbr20@gmail.com | LinkedIn | Github | brianchill.us/

Education

George Mason University — Fairfax, VA
Computer Engineering, BS — *Expected May 2025*

- Notable Courses: Circuit Analysis I/II, Data Structures and Embedded Systems Programming, Continuous-Time Signals and Systems, Digital System Design, Operating Systems, Computer Organization, Embedded Systems, Computer Architecture, Linear Electronics, FPGA Design in VHDL, Microcontrollers

Work Experience

Software Developer — Reston, VA
CACI International Inc. — *May 2023 – Present*

- Modified and developed SQL scripts for conversion between government financial systems.
- Worked on Python-Selenium-based automated testing tool for Momentum based software.
- Utilized government-based Agile approach to efficiently iterate on given requirements.
- Received public trust clearance from VA.

Sales Associate and Print Specialist — Manassas, VA
The UPS Store — *November 2020 – Present*

- Managed Enterprise IT network and point of sales systems.
- Supervised high volume print jobs and designed methods to efficiently manage multiple enterprise grade printers.
- Worked in national and international logistics for major retail package services.
- Designed and printed customers personalized business advertisements.

Projects

Keyboard Design
brianchill.us/#/Keyboard

- Designed schematic, PCB, and external housing for external manufacturing.
- Added functionality to existing firmware and documented changes/code on Github.
- Wrote bill of materials and chose cost effective components for design which were implemented into final product.

Drawing Robot
brianchill.us/#/PiDraw

- Developed program for decoding location instructions and drawing on custom designed hardware.
- Used OpenCV to process images and generate location instructions from input images.

Hardware-based Line Following Robot
brianchill.us/#/LineFollower

- Designed Opamp based platform to drive four motors - Controlled by photoresistor-LED, TX-RX design.
- Integrated low-budget off the shelf components into design to satisfy budget requirements.

Microcontroller Powered Video on OLED Screens
brianchill.us/#/Oled

- Developed software interface to transmit video over serial to off the shelf microcontrollers.
- Used OpenCV to process video and compressed data for transmission and low-level playback.

Technical Skills

Languages: Python, C/C++, Java, PL/SQL, MATLAB, VHDL, JS/Web, Bash
Software/Packages: MS Office, Adobe CC, Fusion 360/Inventor, Xilinx Vivado/Vitis, KiCAD/PSpice, Docker, Git, Jenkins, SQL Developer, Nginx/Apache, Node - ReactJS, OpenCV, Linux, Proxmox
Hardware Competencies: FPGAs, Microcontrollers, Elec.Testing Insts., Networking Devices

Awards & Certifications

IT Silver Medal | June 2020
GMU Tech Talent Awards | Multiple Years