

# Brian Hill

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## EDUCATION

### George Mason University

*Computer Engineering, BS*

Fairfax, VA

*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

*CACI International Inc.*

Reston, VA

*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

*The UPS Store*

Manassas, VA

*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, Autodesk 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

**AWS Cloud Practitioner Accreditation** | June 2023

**GMU Tech Talent Awards** | Multiple Years