

# Brian Hill

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## SUMMARY

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Software developer well-versed in systems ranging from large enterprise-wide financial programs to small scale embedded computers. Driven to implement robust, real-world solutions applicable to a wide range of problems while ensuring compliance and performance. Strong knowledge in both software development and hardware engineering, providing a blend of both skill sets when implementing complex solutions. Brings a unique outlook and energy to new situations and positions.

## CLEARANCE

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Active Public Trust Clearance

May 2023

## WORK EXPERIENCE

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### Software Developer

CACI International Inc.

Chantilly, VA

May 2023 – Present

- Modify and develop SQL scripts for conversion between government financial systems.
- Develop Python-Selenium-based automated testing tool for government financial software (Momentum).
- Utilize government-based Agile approach to efficiently iterate on given requirements.
- Deploy and release solutions to client with minimal downtime and confirmed functionality.
- Test and maintain current and legacy systems to validate performance and compliance with current systems.
- Analyze client requirements and created necessary documentation for future development and integration.
- Work with experienced team members to design and modify existing workflows surrounding previous software solutions.
- Evaluate and implemented new interface technologies to provide fresh and intuitive user experience.
- Develop Node-based GUI for Python backend in ReactJS.

### Sales Associate and Print Specialist

The UPS Store

Manassas, VA

November 2020 – Present

- Manage Enterprise IT network and point of sales systems to handle high traffic with minimal downtime.
- Supervise high volume print jobs and designed methods to efficiently manage multiple enterprise grade printers.
- Work in national and international logistics for major retail package services.
- Design and print customers personalized business advertisements.

## SKILLS & ATTRIBUTIONS

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**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

## EDUCATION

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### 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

## AWARDS & CERTIFICATIONS

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**AWS Cloud Practitioner Accreditation** | June 2023

**GMU Tech Talent Awards** | Multiple Years

## PROJECTS

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### **Keyboard Design**

*brianchill.us/#/Keyboard*

- Designed schematic and PCB for external manufacturing as well as automated assembly of onboard components.
- 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.
- Designed and manufactured ergonomic housing to contain assembly and remain consistent with similar designs on the market.

### **Open-Source Macropad**

*brianchill.us/#/Macropad*

- Designed simple, easy to manufacture 3D printed case, printable on any 3D printer.
- Wrote firmware based on existing, widely used software to promote consistency between similar keyboards.
- Engineered PCB for cost effective production with alternatives to reduce reliance on third party manufacturing.

### **Drawing Robot**

*brianchill.us/#/PiDraw*

- Developed program for decoding location instructions and drawing on custom designed hardware.
- Designed CAD model of all components for low material 3D printing and structural stability during high stress movements.
- 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.