Clay Buxton

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Experience

DevSecOps Engineer at **Lockheed Martin |** King of Prussia, PA · · · · · · · · · · · · · · · Since May 2020
- AEHF Operational Support Element. Supporting mission control development, building machines for customer.
- Developed a CI/CD Pipeline for the environment. Provides builds, hosted repositories, automated testing, static code quality and security analysis in a quick, consistent, and accurate environment. Modernizing the Development Environment,
- Red Hat Enterprise Linux and Gitlab Administration.
- Implementing DoD Risk Management. Assessing compliance and performing remediation, automated with Ansible.

Systems/Software Engineering Intern at **Lockheed Martin |** King of Prussia, PA · · · · · May 2018-April 2020
- Engineering work with Java, C++, GNU Radio on a large scale, micro-service driven, command and control application.
- Administration work with Windows and Unix environments, networking systems and more.
- Extensive work on agile teams, working with classified material, and creating automation systems.

Computer Engineering and Science TA at **Elizabethtown College |** Elizabethtown, PA · · · · · Since May 2018
For: Computer Science 1, Digital Design I II, Software Engineering, Advanced Computer Engineering.
- Created new teaching material, lab projects, and documentation for lab hardware and software
- Wrote a manual for the Basys 3 FPGA. Includes a Verilog tutorial, targeted C compilation, RTL Design, verification, and timing analysis.
- Assisted students with lab activities and projects

Projects

Cosmic | Senior Project · Since August 2019

Cosmic is a fully simulated 8-bit computer architecture. The entire architecture and instruction set was created from scratch and works in a rich environment. The environment includes a debugger, a full-fledged GUI and an assembler. Cosmic is hard to explain in words, but better in code: https://github.com/clbx/Cosmic

LoveCube | Personal Projects · July 2020

LoveCube is a wireless message box based off the ESP32 written in C++. I built a circuit that connected notification LEDs and an OLED screen to an ESP32 to display messages that it pulls off a central server. The server is written in Python and uses a MySQL database to store messages sent to it by the users. I also modeled and 3D printed the enclosure that it's housed in. Software and designs are available on GitHub: https://github.com/clbx/LoveCube

Otis | Elizabethtown College · January 2019 – May 2019

An affectionally named neural networking algorithm, Otis was developed by 5 students on an Agile team where I acted as our scrum master. Otis can learn based on binary data and make reasonably accurate assumptions about the data. Otis' development was fully automated with CI/CD, unit testing, automatic documentation, and code coverage. All code is available on GitHub: https://github.com/etown-blue-team/Otis

HomeLab | Personal Project · Since 2016

A continuing project in learning more about networking, security, and systems administration. "JuiceNet" is a home networking setup which is made of enterprise grade equipment. JuiceNet is wholly Infrastructure as Code being entirely stood up using Terraform, Ansible and similar technologies.

Skills & Abilities

Languages: C/C++, Java, C#, PowerShell, Python, Go, Swift, HTML/CSS, Bash, MySQL, Java/TypeScript, MATLAB, and more
Platforms: Windows, Linux, and Unix server environments, Git, Gitlab, Agile, JetBrains IDEs, Eclipse, CI/CD, Hardware Expertise, Ansible, Terraform, Embedded Systems, Software engineering methodologies, Retro-computing.

Education & Certifications

Georgia Institute of Technology | Master of Science | Online · · · · · · · · · · · · · · · 4.0 GPA | Dec 2022
- M.S. Computer Science. Specializing in Computational Systems

Elizabethtown College | Bachelor of Science | Elizabethtown, Pa · · · · · · · · · · · · 3.42 GPA | May 2020
- B.S. Computer Engineering, B.S. Computer Science

Secret Level Department of Defense Security Clearance