

Experience

Associate Software 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 from for the environment. Provides builds, hosted repositories, automated testing, static code quality and security analysis in a quick, consistent, and accurate environment.
- Red Hat Enterprise Linux and Gitlab Administration.
- Implementing DoD Risk Management. Assessing compliance and performing remediation, automated with PowerShell and 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 2 Dell PowerEdge Servers. The lab runs off ESXi and supplies NAS, web server, media server, private git source, game servers, ad blocker, VPN, full windows domain, CTF and Wargame challenges, and more

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, Agile, JetBrains IDEs, Eclipse, CI/CD [Gitlab and Travis CI], Hardware Expertise, Embedded Systems, Software engineering methodologies, Retro-computing, Game Design.

Education & Certifications

Georgia Institute of Technology | Master of Science | Online 3.5 GPA | Dec 2022

- M.S. Computer Science

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