**Clay Buxton ­­­­­**

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# 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 scratch for the environment. Provides builds, hosted repositories, automated testing, static code quality and security analysis in a quick, consistent, and accurate environment.
* Implemented DoD Risk Management. Assessing compliance and performing remediation, automated with PowerShell

**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>

It’s because word sucks and you can’t make lines as tall or short as you want. So, screw you Microsoft I’m smarter.

**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>

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**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>

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**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 a 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 May 2023

* M.S. Computer Science

It’s because

**Elizabethtown College** | Bachelor of Science | Elizabethtown, Pa 3.42 GPA | May 2020

* B.S. Computer Engineering, B.S. Computer Science

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**Secret Level Department of Defense Security Clearance**