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# Luke Johnson

Fort Collins, Colorado

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## SKILLS

**Programming Languages** - Python • C# • TypeScript • JavaScript • Go • Java • Rust • C++

**Scripting Languages** - Bash • PowerShell

**Visualization Technologies** - Unity • SteamVR • ArcGIS

**Data Science** - Hadoop • Apache Spark • PySpark • NumPy • Matplotlib • pandas • GeoPandas

**Web Technologies** - ASP.NET • Angular • React • Django • Flask • HTML5 • CSS • Selenium

**Tools** - pip • .NET CLI • Cargo • npm • Maven • Docker • Git • Jupyter • GitLab CI/CD

**Databases** - SQL • MongoDB

**People** - Teamwork • Leadership

## WORK EXPERIENCE

**Lockheed Martin, Littleton, CO** - *Software Engineer*

August 2021 - Present

- Creating a data-driven VR flight simulator for the Orion spacecraft with Unity 3D and SteamVR
- Developing a digital twin framework for spacecraft, satellites, and missiles with Unity 3D
- Implementing RESTful web services with Angular, ASP.NET, and MySQL
- Led a small team of developers to implement a scheduling and planning tool for our internal operations team

**Hewlett Packard Enterprise, Fort Collins, CO** - *Software Development Intern*

May 2019 - May 2021

- Implemented and containerized developer tools for internal customers using many different languages and technologies, like Django, React, Python, Go, Bash, Selenium, and Docker
- Research and development for HPE One View involving dissecting and containerizing a large monolithic application such that it would become dozens of microservices

**Black Mesa Interagency Hotshot Crew, Overgaard, AZ** - *Wildland Firefighter*

April 2015 - September 2016

- Served with a team of twenty elite wildland firefighters charged with suppressing wildfires across the U.S.
- Regularly overcame extreme challenges in intense, stressful, and dangerous situations
- Held a highly coveted position reserved for the hardest workers on the lead saw team

## EDUCATION

**Colorado State University, Fort Collins, CO** - *B.S. Computer Science (Networks and Security Concentration)* - 3.961 G.P.A. - Graduated May 2021

## PROJECTS

**U.S. Internet Speed Analysis**

- Analyzed internet speeds across the U.S. in datasets provided by Ookla

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- Used Pyspark to perform reduction operations on the data by removing outliers and other potentially unreliable entries
  - Used GeoPandas and ArcGIS on the reduced dataset to further reduce the data and determine which entries were within the U.S. in order to determine the areas with the best and worst performing internet service providers

### **Privacy Conscious Twitter Scraper**

- Implemented a Twitter-scraping bot in order to follow current events without creating a Twitter account
- Scraped Twitter using Tweepy, created a web application for end users with Flask, stored user information in MongoDB, and notified users via text message with Twilio

### **Tamper Resistant and Tamper Evident COVID-19 Infection Tracker**

- Created web interface for reporting COVID-19 infections, as well as the infected persons whereabouts for the last 24 hours using React, Express JS, and MongoDB
- Implemented a database verification system on the Ethereum Rinkeby test net to provide tamper resistance and alerts for unauthorized modifications of the data

### **Anonymous Web-Get**

- Implemented a distributed system to allow a user to anonymously request files from the web using Python
- Achieved anonymity via a stepping-stone network and TLS
- Implemented a simple CLI which allows users to request a file or webpage from the network

### **8-bit Assembler**

- Designed and implemented an 8-bit assembler compatible with a subset of x86 ADM using C

### **Discord Bots**

- Created several Discord bots for server administration, server moderation, and music streaming using several different APIs

### **Multithreaded File Encryption Tool**

- Using Rust and the AES-256 CBC symmetric encryption algorithm, I implemented an efficient, multithreaded tool for encrypting files or entire file systems with password protection