

# Jake Cook

SOFTWARE ENGINEER

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## Education

### Utah State University

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

Logan, UT

May 2021

## Skills

**Languages** Python, Java, JavaScript (Node.js, Vue.js, D3.js), SQL, C# (dotnet)

**Tools** Linux, AWS, Kubernetes, OpenShift, Docker, docker-compose, Jenkins, Grafana, Scrapy, GraphQL, PostgreSQL, MongoDB, Angular

## Experience

### Space Dynamics Laboratory

SOFTWARE ENGINEER

Logan, UT

Jun. 2021 - Present

- Team lead on transitioning a prototype legacy-like application to fully-containerized, kubernetes managed deployment for local testing & AWS deployment & providing technical input on microservice architecture design with a security-first mentality.
- Integrated with a small team to become program experts in DoD DevSecOps practices & begin building & testing methodologies to expand SME role.
- Updated & maintained Jenkins server for CI/CD pipeline & deployment to AWS testing environment.
- Code Escrow & SME support for government partner, regression testing lead & technical expert on contractor delivered platform assisting internal & external stakeholders.
- Designed & deployed applications for kubernetes & OpenShift deployments, including Helm charts.
- Developed & documented automation scripts & tools in python & bash for repeatable workflows, systems testing & benchmarking.

### Space Dynamics Laboratory

ASSISTANT SOFTWARE ENGINEER

Logan, UT

Apr. 2020 - May. 2021

- Designed & implemented a dockerized GIS platform using open source tools & projects for customer integration.
- Contributed security & other general bug fixes to SPOONsite, an open source SmallSat web application, & provided customer support (project ported to NASA S3VI).
- Assisted a customer with data research, visualization, & reporting.
- Designed & implemented a new web application with an Agile team using PostgreSQL, Scrapy, Python, Javascript (Node.js, Nuxt.js) & Tailwind-CSS.

### Vivint

SECURITY ALARM TECHNICIAN

Arkansas, Tennessee

Jan. 2018 - Jan. 2020

- Installed & repaired security & networked smart home equipment in various environments while leading small teams & providing troubleshooting support.
- Trained customers on technical features & system operations for on-site, mobile, & remote access.

## Projects

### Home Server

- Built and configured a server with Ubuntu and multiple RAID arrays for processing and securely storing data with automated offsite cloud backups.
- Documented configurations and developed scripts to quickly deploy multiple docker-compose configured applications to any server.
- Configured a domain name with a reverse proxy and TLS/encryption to multiple sub domains and hardened the server against attacks.
- Host dockerized personal website with Bootstrap and Javascript including playable web game demos served from a Node.js server

### Crop Identification in Keras

- Researched current machine learning applications and efforts in precision agriculture and farming.
- Implemented a Kaggle Jupyter notebook with various data versions, produced a development road-map for the project, and executed research and experiments in optimizing a machine vision model with a CNN for accurately identifying crops with adequate results visualization.

### JS/HTML Web Games

- Designed and built browser-based games of various play types.
- Utilized various algorithms for path-finding, dynamic level terrain generation, and infinite game play.