



# Kirsten Phillips

## Software Engineer

k-h-phillips.github.io   
(434) 917-0499  
kirstenphillips210@gmail.com

## Work Experience

### Software Engineer

*Top Secret/SCI with Polygraph*

IT Availability LLC. – Vienna, VA  
September 2022 – ongoing

#### Python automated data collection and processing applications

**Python** **Playwright** **JSON** **MongoDB** **REDIS** **Bash Scripting** **Powershell** **Azure** **GitLab** **Linux** **Windows**

- Implemented Python applications on Azure infrastructure to accomplish automated data collection via APIs and other collection strategies
- Analyzed and transformed raw and unstructured data into semi-structured JSON data and collaborated with a full stack team that used ETL pipelines to extract entity relationships and display them to end users
- Designed and implemented MongoDB and REDIS databases to store scheduling information and collection metadata, successfully reducing duplicate data collection and storage costs by 50% for US-Government clients
- Implemented database wrappers for create, read, update, and delete (CRUD) operations via Python libraries
- Developed in both Linux and Windows operating systems and used bash and powershell scripting for automated tasks
- Contributed to standard operating procedures (SOPs) for code review, documentation, and codebase management

#### Front-end web application plugin

**JavaScript** **HTML** **CSS** **Bootstrap** **TypeScript** **Node.js** **React** **AWS** **S3** **EC2** **Lambda** **GitHub** **Java** **Selenium**

- Completed API and GUI modernization and refactoring efforts to increase efficiency, stability, and usability of a cross-platform plugin that automates a tedious and error prone process for US-Government host application users
- Collaborated on a simple, well documented, and easy to adopt web API for integrating developers of all different backgrounds and skill levels
- Conducted UI design reviews with internal and external parties to improve the user experience
- Collaborated on the front end to deliver a better user experience, using Bootstrap controls and conforming to strict website accessibility standards on par with the W3C standards
- Developed in a Linux OS on AWS cloud infrastructure and used the AWS S3, EC2, and Lambda services to gather statistics on plugin use cases
- Delivered a modernized release for the plugin with minimal defects in an agile SDLC on a 6 month timeline
- Led the development of automated UI testing suites which led to the discovery and remediation of bugs in both the web application plugin and an email client counterpart
- Supported production systems by answering requests for integration assistance

### Software Developer

G3 Technologies Inc. – Ashburn, VA  
August 2021 – September 2022

#### Full stack data driven web applications

**JavaScript** **HTML** **CSS** **Bootstrap** **C#** **ASP.NET** **Elasticsearch** **NoSQL** **Kafka** **Docker** **Kubernetes** **Ansible**

**Jenkins CI/CD** **MariaDB** **gRPC** **Python** **Selenium**

- Used acquired domain knowledge in cellular technologies to perform ASP.NET (C#) maintenance development and Python automated testing for a full stack data driven web application
- Gained familiarity with common software engineering platforms and services that have widespread use, such as Docker, Kubernetes, Kafka, and Jenkins CI/CD
- Wrote complex Elasticsearch queries to test backend performance and algorithm accuracy
- Designed and developed a full stack application to ingest, process, load, and display audio data to end users
- Conducted in depth UI design reviews with UI experts
- Wrote custom ASP.NET (C#) server controls to meet specific UI and server requirements
- Used gRPC and protocol buffers for communication with underlying audio algorithms
- Designed and normalized a SQL database using MariaDB to store core application data
- Wrote a data model and wrapper layer in C# to enable SQL queries
- Participated in a culture of high programming and documentation standards, in-depth code reviews, and extensive unit, integration, and UI testing geared toward early bug discovery

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## Side Projects

[k-h-phillips.github.io](https://k-h-phillips.github.io)  (ongoing)

- Web development project built with React, Next.js, NextUI, and Tailwind CSS
- Deployed with GitHub pages
- Created to offer more information about me, display my resume, showcase some web design skills, and serve as a platform to display future side projects

**Codecademy Full-Stack Engineer Professional Certification**

(completed Sept. 2024)

- 51 courses and more than 150 hours of coursework to hone software engineering skills and learn new technologies
- Completed mini projects to help gain hands on experience

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## Education

**Bachelors of Science in Computer Science** & Minor in Engineering Business

University of Virginia School of Engineering and Applied Sciences

3.88 GPA

- **Software development:** Software Development Methods, Program & Data Representation, Advanced Software Development, Computer Architecture, Algorithms, Operating Systems, Compilers, Programming Languages for Web Applications, Database Systems
  - **IT and career:** Intro to Cybersecurity, Advanced Cybersecurity, Engineering Ethics and Professional Responsibility, New Product Development
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