William Bogusz

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Technical Knowledge

Skills: Backend Development, Automation Scripting, Cloud Deployment, System Administration, Fullstack Development
Languages: Python, JavaScript, Bash, Powershell, Java, C, SQL, HTML5/CSS
Tools/Frameworks: Git, PostgresSQL, Docker, MySQL, AWS, Nginx, OpenAI, Visual Studio, GitHub Actions, Nessus
Operating Systems: Windows 7/10/11, Linux (Ubuntu, Kali, CentOS), MacOS

Experience

Associate Software Engineer **Sep 2022 – May 2024**
FoxGuard Solutions *Christiansburg, VA*

- Solely responsible for the development and maintenance of a suite of large-scale, in-house automation tools, encompassing extensive scripting based largely in **PowerShell** and **Python**
- Transformed the existing 'security patch delivery' pipeline by using **PowerShell** to automate the entire process, streamlining the aggregation of patch data, download files, and metadata, reducing manual workload by over 95%
- Developed a **Puppeteer**-based **JavaScript** scraping tool to automate the collection of security patch verification data, such as screenshots, ensuring integrity and authenticity of patch files provided to clients
- Led the full lifecycle of these automation tools, from conception to deployment; managed versions with **git**, ensured quality with unit testing, and wrote comprehensive documentation that enabled successful adoption and usage across multiple offices
- Automated deployment of production virtual machines to **VMWare ESXi** using **vSphere** and **Terraform**

Secure Systems Engineering Intern **May 2022 – Aug 2022**
Raytheon Intelligence & Space *McKinney, TX*

- Executed vulnerability scans on various system implementations (PetaLinux, Red Hat, Windows 7, Ubuntu) using Nessus
- Designed vulnerability remediation implementation guides for these systems based on analysis of Nessus output data and scope of product's mission/specific client requests for detection omission
- Tailored DoD STIG compliance expectations by assessing out-of-door functions of system components to ensure that they would be capable of meeting NIST 800-53 compliance

Education

Virginia Tech Engineering **May, 2024**
B.S., Computer Science, Cybersecurity Minor *Blacksburg, VA*

- Intelligence Community Center of Academic Excellence (IC CAE) Scholar
- Awarded stipend for Undergraduate Research under sponsored Raytheon Fellowship (2021-2022)

Relevant Courses: *Applied Software Design, Computer Security, Operating Systems, Data Struct. & Algorithms, Network Arch.*

Projects

GitHub Repository Code Interpreter – SEE LIVE **Oct 2023 – Nov 2023**

- Developed a novel translation mechanism for codebase embedding in **Python**, giving large language models like GPT-4 the ability to semantically search and interpret source code data pulled in bulk from GitHub repositories
- Independently researched and designed this intermediary process that translates code into English-readable commands before vectorization, allowing the language model more performant contextual critical thinking and improved code retrieval accuracy
- Integrated this design into an open-source document loader with **PostgresSQL** for optimized retrieval-augmented generation
- Allows users to rapidly learn and build off of any public repositories by adding them to the knowledge of the language model

Self-Hosted Development and Deployment Platform – SEE LIVE **Jul 2023 - Present**

- Configured and installed an Ubuntu server on surplus personal hardware for development and testing applications
- Utilized **AWS** services and **Nginx/Caddy** reverse-proxy for directing traffic, turning my personal domain into a portal to access and configure tools and applications running on the server
- Employed Docker for containerization, handling multiple web-serving applications in a microservice-like architecture
- Implemented automation scripts, utilized **git**, and established **CI/CD** pipelines with **GitHub Actions**, ensuring efficient development, testing, and deployment of these tools and applications