Daniel Lee

daniel@devshell.net
(360)-909-6604
Camas, WA

Projects

Patient Visualization Tool   A map based web application tool that assists in the discovery of healthcare providers based on various search criteria like their diagnosis codes, patient age ranges, etc. This product is targeted at select group of corporate entities operating in pharmaceuticals and case management. In this project I demonstrated the use of tools like the gRPC framework because it performs well at scale. The product back-end was written in Go and communicated to a Vuejs and Leaflet front-end using gRPC.

Distributed Management Tool   This software allows users to experiment with concurrent programming and distributed service design. The stack includes: Command and Control (C2) server, Package download server, Advanced Persistent Threat (APT) application. The APT has a tiny footprint and runs management functionality modularly upon requests. The APT establishes a communication channel with the C2 and intelligently requests executables from local download servers. This system is also capable of switching to a decentralized C2 system that uses the APTs and a version of the RAFT consensus algorithm.

Systems Research and Applications (SRA) CubeSat Internals   Used in an annual competition hosted by the Experimental Sounding Rocket Association, this software provided communication to the satellite from a ground-station. Written in Go, these programs managed physical components of the 3u sized experimental cube satellite through a distributed platform across multiple microcomputers. Communication to the software controller was sent from the ground-station was sent via radio.

Experience

OfficeAlly   Vancouver, WA
Web Developer   *May 2017 - Present*

- Developed applications and services to build and deploy on docker swarm.
- Refactored sections to improve overall code health and increase performance.
- Collaborated with developers to create optimal designs and workflows for back-end services.
- Reviewed colleague's code and change lists ensuring code quality and best practices
- Implemented agile and scrum methodology to improve velocity and increase team communication.
- Added comprehensive unit tests and practiced TDD to ensure code stability and reliability.
- Introduced gRPC and the micro-service architecture to support communication between different languages and environments across the company's applications and services.
- Added a caching mechanism to a taxing web-API route which improved performance and decreased load on other services.
- Supported the adoption of Git from SVN by suggesting a series of workflows to ease transition.
- Contributed to discussions and documentation to improve and standardize company git practices such as branch naming, commit message formatting, and re-basing history.
- Discovered and reported critical security vulnerabilities that could cause massive damage to company systems and infrastructure.

Technical Expertise

Languages   Python, Golang, C#, C/x86 Assembly, SQL, Javascript, HTML/CSS
Technologies   Flask, Git, Docker Swarm, .NET Core, MySQL, Redis, Kafka, LaTeX, Bash, Vim

Education

Washington State University Vancouver   Vancouver, WA
Bachelor of Science in Computer Science   *Expected: May 2021*