Tony Tian

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Education

University of Waterloo
BASc Computer Engineering
2017 - 2022

Skills

Development
Python
Golang
C++
C
Java
Bash scripting
SQL
Linux & Unix systems
Windows

Infrastructure
Docker
Kubernetes
Helm
AWS
Jenkins
Travis
Nginx

Tools & Database
Git
SVN
Visual Studio
Makefile
MongoDB
PostgreSQL
GCP BigQuery

Activities

UW EnergyHacks | 2019
TerribleHacks | 2018
Hack the North | 2017
Vex Robotics | 2017
UWaterloo Badminton Club

Interests

Badminton
Guitar
Sci-fi and Fantasy Books

Experience

Auvik Networks | Software Developer - R&D Data Acquisition
May 2019 - Aug 2019
- Designed a TCP websocket monitor using the C++ actor framework for continuous liveness checks on inactive sockets
- Implemented a robust multi-threaded scheduler for sockets using Protocol Buffers to relay messages across thread managers
- Developed the infrastructure for a GoLang server that captures HTTP tracing & custom metrics and sends it to Apache Kafka & influxDB for processing
- Created a GoLang StatsD interface to send Go-expvar metrics to Datadog for alerting

IBM Cloud | Software Developer - Cognos Analytics
Sept 2018 - Dec 2018
- Extended a GoLang Vault tool with a CLI and event handlers to manage the injection of keys & secrets; resolved major security encryption flaws and migrated user data
- Built a Python-Kubernetes resource manager that automates cluster-wide data syncs
- Implemented event handlers to create and update Secrets, Service Accounts, and Namespace objects on the cluster
- Composed API mocking tools for test suites using Python's Unittest framework to reach over 95% code coverage

IBM Cloud | Software Developer - Cognos Analytics
Jan 2018 - May 2018
- Developed a backend SFTP file upload system using Kubernetes and Helm for users to deploy custom resource packages
- Used Unix tools to implement SSH server handling for a SFTP system on Linux to resolve a production roadblock
- Containerized legacy web applications with Docker to deploy on Kubernetes
- Improved a deployment tool to increase the efficiency of continuous delivery

Projects

Coinsys Bot   Personal Project
- Built a GoLang tool to run a technical analysis of popular cryptocurrencies with the MACD indicator & histogram
- Utilized Go-Cobra for a CLI interface and created a MongoDB driver interface to fetch and store historic cryptocurrency stocks
- Integrated visuals and graphing of the analysis using a Go-Chart handler

TrashTag It - UW Energy Hacks   June 2019
- Winner of MLH's Best use of Snapkit SDK and Transposit's framework categories
- Built an Android app that allows users to log outdoor littering locations and pictures
- Developed JS API endpoints for metrics and a Python Flask server that uses Google Maps API and Snapkit SDK

STALK.Bot - Hack the North   Sept 2017
- Created an automated rotating assembly with a face tracking webcam using an Arduino
- Implemented live facial predictive tracking with OpenCV in Python with cascade classifiers

TCP Server and Client   Personal Project
- Developed a Linux TCP server that can handle multiple clients connecting concurrently to send text messages using C