

TJ Yang

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Skills

Programming Languages Python, C, C++, Java, Ruby, Javascript, HTML, CSS
Other Tools Git, Docker, Kafka, Elastic Stack, Splunk, Kubernetes, Linux, ROS

Experience

Cruise LLC

San Francisco, CA

SOFTWARE ENGINEERING INTERN - PLANNING INTERACTIONS

Jan. - Apr. 2020

- Created automated graph dashboards for test drive analytics using **Python** and **Dash**
- Rewrote internal **ROS** data pipeline to strip unneeded debug and execution data, leading to a 40% reduction of disk and ram usage during automated driving
- Rearchitected **C++** test suite to increase modularity and cohesion
- Developed functionality to spoof dynamic object trajectory and maneuver data for more realistic test scenarios

Splunk Inc.

San Jose, CA

SOFTWARE ENGINEERING INTERN - ENTERPRISE SECURITY

May. - Aug. 2019

- Engineered a prediction engine to recommend analyst actions for security events using **Machine Learning** models and **MLTK** in **Python**
- Implemented a front-end interface for easy selection and execution of recommended actions in **Javascript**
- Added searching functionality to perform automated lookup and enrichment of user asset data

SSIMWAVE Inc.

Waterloo, ON

C/C++ SOFTWARE ENGINEERING

Sept. - Dec. 2018

- Developed a CEA708 closed caption decoder for data format validation in **C++**
- Upgraded the video analytics pipeline to incorporate and monitor video quality metrics with increased precision
- Built telecine video filters to decode interlaced video using **FFmpeg** video processing libraries

eSentire Inc.

Cambridge, ON

SOFTWARE DEVELOPER

Jan. - Apr. 2018

- Developed and updated filters in **Ruby** for **Logstash** to parse audit logs from multiple sources including Dropbox, AWS, and Office 365
- Rewrote entire **Python** testing framework to utilize a C-based **Kafka** client, increasing message throughput efficiency by over 6.5x

University of Waterloo Autonomoose

Waterloo, ON

SIMULATION SOFTWARE ENGINEER

May - Aug. 2017

- Programmed **ROS Nodelets** in **C++** for data transfer and virtual test monitoring
- Coded C++ to ROS MSG file translation and automatic function code generation in **Python** to save dozens of hours of manual work

Education

University of Waterloo

Waterloo, Ontario

CANDIDATE FOR BACHELOR OF SOFTWARE ENGINEERING

2016 - 2021

- Dean's Honor List