



KRIS LAI

Full Stack Software Engineer

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PROGRAMMING

Python Java C C++

C# Golang Haskell

Scheme

Git SVN ClearCase

docker

WEB DEV

JavaScript TypeScript

Angular Spring Boot

PHP HTML5

RESTful API

DATABASE

Db2 InfluxDb MongoDB

MySQLdb

METHODOLOGY

Agile (Scrum) OOP

Software Architecture Design

Test Driven Development

Design Thinking DevOps

SDLC

LANGUAGES

English: Native

Cantonese: Native

Mandarin: Working Proficiency

EXPERIENCE

Full Stack Software Engineer | Peak Power Inc Jul 2020 – Present

- Developing a customer portal web service with RESTful API framework. Frontend developed using Angular10 with Spring Boot. Utilized Python, Java, and PHP as backend services to collect and interact with information from Energy Storage and Building Sensors. Server hosted on AWS and rerouting traffic using Elastic Load Balancer.
- Containerizing backend API with Docker, and adding error tracking system Sentry and Datadog.
- Created a multi-threaded driver to process streaming data on Modbus Registers from RTAC using Fieldtalk Library, processing energy storage and meter (Powin, Tesla, SunGrow, etc) data. The driver connects the backend API with the RTAC on multiple physical sites across Canada and US, allowing for remote control.

Software Development Team Lead | IBM Feb 2019 – Jul 2020

- Led a project to create an API which acted as a standalone service that automates the process of investigating failures within Db2. The software is built on top of Python and Golang, containerized as a RESTFUL service using Docker.
- Managed Db2's functional verification team of 11 developers and QAs, to ensure Db2's transition from development to production stage with minimal errors in all components.

Digital Quality Engineer | RBC May 2017 – Aug 2017

- Within one month, optimized the online application by minimizing the fields that are required to complete the application and enhanced compatibility with mobile devices on IOS and Android.

Technical QA & Automation UI Developer | RBC May 2016 – Aug 2016

- Data Generation & Intelligent Masking: Extract production data and generate data using Test Data Manager. Key values pair are intelligently masked before transferring data to test environment.
- Test Automation UI Developer: Developed a Windows Application using C# for automatically generating a structured configuration file. The file is then imported into Robot Framework for comparison between Teradata and local table.

PROJECTS

Algotrading | Personal Interest Feb 2021 – Present

- Portfolio Analyzer: As of now, it scraps the holdings from SP500 and collects the data for each holdings. Using pyfpot library, processes the data with Efficient Frontier to adjust weights and create a portfolio given the available fund and allocations.
- Stock Forecasting: Given a monthly interval, it can predict the next day using the past prices. It uses Sklearn library Support Vector Machine ML model.

EDUCATION

Bachelor of Science (B.Sc.) | University of Toronto 2013 – 2018

Specialist in Software Engineering