# 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
React | Angular | Django
Spring Boot | PHP | HTML5
RESTful API

## DATABASE

Db2 | InfluxDb | MongoDb
MySQLdb | Postgres

## 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 Angular 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.
- Created a multi-threaded driver to process streaming data on Modbus Registers from RTAC, processing energy storage (Powin, Tesla, SunGrow, etc) and meter data across North America. The optimized driver decreased latency by 500% between sending and receiving data compared to previous workflow and reduced maintenance cost exponentially by managing one source code rather than multiple versions of code for each site through Object-oriented design.
- Containerizing backend API with Docker, and adding error tracking system Sentry and Datadog.

### 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 intelligently mask the key-value pair before transferring data to test environment.
- Test Automation UI Developer: Developed a Windows Application using C# for automatically generating a structured configuration file, which will automatically feed into Robot Framework for comparison between Teradata and local table.

## PROJECTS

### Algotrading | Personal Interest 📅 Feb 2021 – Present

- Full-stack development using Django and React framework which offers variety of techniques to assist in stock trading. Features includes Stock Forecasting with Machine Learning and Neural Network, VADER Sentiment Analysis, and Portfolio Optimization which process holdings from indices like S&P500 and Nasdaq-100 with Efficient Frontier to adjust weights and create a portfolio given the available fund.

## EDUCATION

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

- Computer Science - Specialist in Software Engineering