# Josie (Yifang) **Li**

4A COMPUTER SCIENCE

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## Skills

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|---|---|
| **Languages** | Python • C++ • Java • JavaScript • C • Scala • HTML • CSS • R • Scheme |
| **Technologies** | AWS • SQL • REST API • Flask • React JS • TensorFlow • Keras • PyTorch • MongoDB • Pandas • Spark |
| **Tools** | Linux • Docker • Git • Bash • Jupyter Notebook • Kubernetes • PyCharm • Heroku • JIRA • Jenkins |

## Experience

### Software Developer - Advanced Threat Analytics
*Sep 2020 - Present*

ESENTIRE INC
*Remote*

- Stabilizing and standardizing **Docker**-based cloud security attack detection **Machine Learning** model (LSTM and CNN) by building ML pipeline components using **Python**, **TensorFlow** and **Keras** in **AWS SageMaker**
- Developing data extraction automation to query client and data log databases and update **PostgreSQL** tables in **Scala** using **JVM**, **Apache Kafka**, Sumo Logic query initiator and task schedulers
- Accelerating database transactions through development and migration of **Kubernetes** clusters into new metric databases

### Deep Learning Research Developer
*May 2020 - Aug 2020*

VISION AND IMAGE PROCESSING LAB, UNIVERSITY OF WATERLOO
*Remote*

- Designed product defect classification application by developing new **Supervised Learning** model with Convolutional Neural Network using **Keras**, **PyTorch**, **NumPy** and **OpenCV**
- Developed anomaly inspection computer vision model with **100%** classification accuracy and **92%** quadrilateral bounding box accuracy with **Python** using YOLOv3

### Architect
*Sep 2019 - Dec 2019*

SUN LIFE FINANCIAL
*Canada*

- Designed and automated ETL process on product systems using **Java** to accelerate 2 months of manual data extraction work
- Maintained data integrity through data manipulation, **XML/HTML** transformation and exporting, csv backup and data migration using **Java**

### Quality Assurance Analyst (Automation Developer)
*May 2018 - Aug 2018*

VALIDUS RESEARCH INC
*Canada*

- Developed automation tests for the capital allocation and pricing modeling systems using **Python**, HTML and **CSS**
- Analyzed **RESTful APIs** to ensure correct connection between user interface and financial modeling systems
- Performed data analysis using **SQL** to report modeling system data to IT team

## Projects

### Canada COVID-19 Spread Model

- Built COVID-19 mobility-based forecasting application with **React JS**, **Python Flask**, **MongoDB** and **PyTorch**
- Deployed with **Heroku** on `https://covid-scenario-modelling.herokuapp.com/`; scheduled training with **Unix Cron**

### Image Version Comparison Application

- Developed a full stack App that stores and compares different versions of an image with **Python Flask** framework
- Built frontend with **JavaScript** and HTML/CSS and backend with **Python** and **MySQL**, following **Rest API** style
- Performed object detection with YOLOv2 model using **TensorFlow** to find differencies between different versions of an image

### Chess AI Player

- Developed AI player algorithm for chess game with **C++** using minimax algorithm with depth level 2 following **OOP** principles
- Led 2 team members and designed the overall project with controller and observer software **design patterns**

## Education

### University of Waterloo
*Sep 2017 - Present*

BACHELOR OF COMPUTER SCIENCE
*Waterloo , Ontario*

- GPA: **3.89**/4.0     Faculty Average: **90.67**/100
- Relevant Courses: Object-Oriented Software Development • Intro to Machine Learning • Algorithm • Data Structure and Data Management • Operating System • Stat Learning-Function Estimation • Compiler • Applied Linear Models