# Jeremy (Ruihan) Wei

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## SKILLS

**Languages**   Java • Python • C# • JavaScript • TypeScript • Kotlin • C/C++ • MATLAB
**Technologies**   React • Redux • Angular • Node.js • Spark • MongoDB • DynamoDB • SQL • Elasticsearch • Redis
**Tools**   AWS • Azure • GCP • Git • Linux • Docker • Jenkins • Heroku • OpenCV • PyTorch • TensorFlow

## WORK EXPERIENCE

### GOOGLE | Software Developer - Cloud AI                    Remote | Apr. 2021 – July 2021

- Designed and developed ML prediction metrics generation and export to enable customizable data analytics and improve client confidence with **Java**, **TypeScript**, **Kotlin**, **C++**, **Angular-Redux**, FlumeJava (data-parallel pipelines), GCS, **MySQL** and Cloud SQL
- Designed asynchronous operation graphs in Java (internal infra) and Kotlin (coroutines) to achieve an avg. of **0.28s** response time for metrics generation, utilizing **gRPC** framework and **protocol buffers**
- Designed and developed phrase-level labeling to improve label specificity, data accuracy and ML prediction accuracy, with an average of **10%** coverage in client projects

### AMAZON | Software Developer - Ads Recommendations              Remote | July 2021 – current

- Designing and developing a framework for rapid feature rollout/analysis, A/B testing and ML experimentation with **Java**, **Kotlin**, Scala, Python, **AWS**, **Docker**, Fargate, Elasticsearch, **DynamoDB**, **Spark** and Glue

### IBM | Full Stack Developer - Watson Finance                    Toronto | Sept. 2019 – Dec. 2019

- Implemented universal wildcard search and refactored/enhanced all search filters leading to **30%** elevated performance, using **JavaScript/TypeScript** (**React-Redux**), **C#** and T-SQL
- Developed and refactored user state/data migration, data model modification, user query audit logging and exporting logic following the **REST API** architectural style to improve client satisfaction

### UBISOFT | Software Developer                              Remote | Jan. 2021 – Apr. 2021

- Implemented real-time communication between client services with **Redis** message broker in **C#** and **Python**
- Developed and refactored REST-API endpoints which improved efficiency of asset generation by up to **20%**, utilizing Python, Falcon Web Framework, **SQLAlchemy**, **CentOS**, and Nginx Web Server

### VIP LAB | Deep Learning Research Developer                   Remote | May 2020 – Aug. 2020

- Developed Convolutional Neural Network and Long Short-Term Memory model for multivariate time series forecasting of COVID-19 spread in Canada in **Python**, utilizing **TensorFlow**, **Keras** and **PyTorch**
- Developed COVID-19 mobility-based forecasting web application using **React JS**, **Python** Flask framework, **MongoDB** and **PyTorch** (GitHub). Deployed with Heroku ; training scheduled with Unix Cron

### UNIVERSITY OF WATERLOO | Research Developer               Waterloo | May 2019 – Apr. 2021

- Developed **Aspect-based Sentiment Analysis** (**NLP**) models for industrial partners using BERT, Python and PyTorch
- Development of a robotic head in **C** with Raspberry Pi through the CAN communication protocol

### LABORIE | Software Developer                            Mississauga | May 2018 – Aug. 2018

- Developed release notes generation and project baseline analysis for a workflow management tool in **C#** and WPF utilizing **MVVM** and async processing; refactoring increased data extraction efficiency by **20%**

## PROJECTS

### NEOWULF - SOFTWARE TEAM LEAD ⧉              Building an Exoskeletal Grip Assist

Interfaced with Myo armband from Arduino and PC through Bluetooth in **C++** to acquire and process EMG signals and facilitate biometric control of exoskeleton; project allowed a quadriplegic to control finger movements with biceps

## EDUCATION

### University of Waterloo                              Waterloo | Sept. 2017 - Apr. 2022

Candidate for Bachelor of Applied Science, Biomedical Engineering, Artificial Intelligence option