

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 • Jira • Jenkins • Heroku • OpenCV • PyTorch • TensorFlow • GitHub

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 - DISPLAY ADS RECOMMENDATION

REMOTE | JULY 2021 – CURRENT

- Designing and developing an internal framework/API for rapid feature rollout, ML experimentation (e.g. parameter tuning) and A/B testing, with **Java, Kotlin, Scala, Python, AWS**, Elasticsearch, **Dynamo DB**, **Spark** and Glue

IBM | FULL STACK DEVELOPER - WATSON FINANCIAL SERVICES

TORONTO, CANADA | 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**, 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 textbfPyTorch. Deployed with Heroku ([link](#)); training scheduled with Unix Cron ([GitHub](#))

UNIVERSITY OF WATERLOO | RESEARCH DEVELOPER

WATERLOO, CANADA | SEPT. 2018 – CURRENT

- Developing **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 MEDICAL TECHNOLOGIES | SOFTWARE DEVELOPER MISSISSAUGA, CANADA | MAY 2018 – AUG. 2018

- Developed release notes generation and project baseline analysis for a workflow management tool in **C#** utilizing **MVVM** and async processing (UI in WinForms); 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, ON | Apr. 2022

CANDIDATE FOR BACHELOR OF APPLIED SCIENCE, BIOMEDICAL ENGINEERING, ARTIFICIAL INTELLIGENCE OPTION