Edward Ren

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Languages	Python, C++, Ruby, Java, GraphQL, JavaScript, SQL, Elixir, Scala, C, Bash
Technologies	Django, Rails, PyTorch, Docker, Redis, GCP, Spark, Node.js, React, MongoDB

Experience

Facebook / AI Solutions Software Engineering Intern — New York City (Remote), Aug 21 - Dec 21
- Setup metrics pipeline in Ads personalization model splitting to aggregate analytics on different quantization and compression strategies for **PyTorch** models ranging from <1Gb to 2Tb
- Developed real-time performance framework in **Python** for the benchmarking of neural network embeddings and fully connected layers during model optimization for ~2000 models daily

Shopify / Payment Flexibility Backend Developer — Ottawa (Remote), Jan 21 – Apr 21
- Highly optimized draft order creations using **Ruby** attribute schemas to pre-validate inputs and cutting response time by up to 80% for orders traffic accounting for 15% of all gross merchandise volume (GMV)
- Defined **GraphQL** endpoints to update invoice overdue dates for "buy now pay later" draft orders
- Developed dashboards in **Datadog** by tagging low cardinality payment metrics from **GraphQL** requests

Postmates by Uber / Merchants Backend Developer — San Francisco (Remote), May 20 – Aug 20
- Redesigned payments pipeline in **Django** to individually label aggregated fees for 14,000+ shops
- Created API endpoint in **Elixir** to independently update store items, cutting compute bottleneck up to 40%
- Defined Avro schema generation tools to migrate **Kinesis** logs to **Kafka** events in **GCP**

TextNow / Internal Tools Developer — Waterloo, Sept 19 – Dec 19
- Implemented RESTful API in **Ruby** to support parent-child user relationships in subscription payments
- Rerouted device tracking service in **React** by batching API calls to **Redis** to cut load speed by 90%

IBM / Advanced Analytics Software Developer — Calgary, Jan 19 – Apr 19
- Designed pipeline to transfer partitioned **Spark** dataframes to IBM **Cloud S3**, leading to 75% faster writes
- Tuned **scikit-learn** Adaboost classifier as part of a first of a kind AI mineral deposit prediction model

BlackBerry QNX / Open Source Software Engineering Intern — Ottawa, May 18 – Aug 18
- Developed **Dockerized** package regulatory system with **Django** to cut time spent on certifications by 90%

Projects

WATonomous / Team Website and Backend / Web Lead / React, Express.js		2017-2019
HeartBit / Biometrics Analytics App / Hack The North Winner - CANSOFCOM (Git)		2019
Recycle Can / Creator and Developer (recyclecan.ca) (Git)		2017

- Developed eco-navigation app in **Swift** with 18,000+ downloads to guide users to recycling centres

Education

University of Waterloo - *Bachelor of Software Engineering* — Sept 2017 – Apr 2022
- **3x** Deans Honours List recipient (GPA > 3.9/4) | ACT: **35/36**, 99th percentile
- **Courses**: Relational Databases, Algorithms, Concurrency, Software Engineering Principles (OOP)

Interests	Skiing, chandlery, blitz chess, card magic, speedcubing, bouldering