





Kevin Liang

 [KevinLiang10](#) |  m33liang@uwaterloo.ca |  liangmo.net.cn |  [KevinLiang10](#)

EXPERIENCE

Deliverect

May. 2022 – Aug. 2022

Software Engineering Intern

Toronto, Ontario

- Provided maintenance for 160+ integrations and core platform of the Deliverect **Flask** backend with **MongoDB**.
- Update and Modify **React** frontend for core services. Debug using Chrome developer tools.
- Reconstructed ordering with **Celery thread pooling**. Achieved **instant response** to order requests.
- Optimized **data caching** on POS data synchronization for Deliverect's core account management platform. Decreased time cost for synchronization including more than 1 million products from 6 minutes to under 28 seconds. More than 2000 customer locations are benefited for optimization of this daily operation.
- Used **Docker** to host front-end and back-end services locally for testing purposes. Implemented scripts to manage local and production database based on internal **REST client library**.

Snapcommerce

Jan. 2022 – April, 2022

Software Engineer

Toronto, Ontario

- Implemented and maintained the Snappay project in **Python (Flask)** with **PostgreSQL** in an **Agile** environment.
- Monitored performance and troubleshoot via **Postman and Datadog**. Wrote unit and integration tests with Pytest.
- Used **Google Protobuf** to define the server API's proto message and communicate using serialized data.

Quantum Nano Center - University of Waterloo

May. 2021 – Aug, 2021

Python Developer

Waterloo, Ontario

- Created python API via **Numpy and Jax** for simulating quantum waveform in experiment.
- Designed experiments simulation **interface** that provides auto tracking of the **experiment procedure** on cloud.
- Applied **JIT compilation** to increase the re-usability of experiment components and decrease simulation run-time.
- Optimized the validation of waveform object before waveform manipulation by object hashing. Decreased validation time from few minutes to below 10 seconds.

PROJECTS

PetBuzz (GoLang team project - backend)

- * Developed a server in **Golang** with **Gin** and utilized Postgresql with **CockroachDB**. Set up table definitions, supported storing of custom data structure and established table relations via **Gorm**.
- * Used **JSON web token** with EdDSA signature for access validation and account identification. Set token expiring time to provide extra security. Implemented **token renew** on activity to keep activated client logged in.
- * Constructed the server APIs in **RESTful** design with JSON. Achieved body validation and serialization by **JSON binding** of Gin, and kept response size under 1KB.
- * Implemented image hosting using **AWS S3**, allowed App to access image on use without adding load to server.
- * Deployed on an **AWS EC2** server, had CI/CD setup with **Github action** and AWS CodeDeploy.

Hand2Hand (React + Django)

- * Created fluid and clean front-end UI with **React** and styled with **Tailwind CSS**.
- * Applied **Redux** for state management to maintain predictable data source and speedup server side rendering
- * Implemented a set of **RESTful** API to handle requests like get product data or post shopping cart data

EDUCATION

University of Waterloo

Sept. 2019 – Present

Bachelor of Computer Science (Coop program) 4A. **Major Average: 92.46**

Waterloo, Ontario

- * **Coursework:** Object Oriented Programming, Data Structures, Algorithms, Databases, Computer Systems, Neural Networks, Machine Learning, Application development, Applied cryptography, Computer Security.