Nathan Li

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Skills

Languages: Python, JavaScript, TypeScript, Java, Elixir, SQL
Technologies / Frameworks: Spark, Flask, React, Node.js, Ember.js, AWS, GCP

Experience

Amazon   **June 2021 – Present**
Software Development Engineer   *Toronto, ON*
- Developing a new automated data pipeline and microservice to calculate capacity controls and moderate retail inbounding of **147,000** products to fulfilment centers with **Python, TypeScript** and **AWS**
- Extended a proprietary inventory allocation algorithm governing purchases to Amazon warehouses in **5** EU countries by implementing support for **4 million** Hazmat retail items, resulting in a **65%** reduction in error of inbound orders
- Redesigned input generation architecture of capacity control mechanism to improve reliability and efficiency of warehouse list querying, reducing the weekly on call burden by **5** hours
- Implemented rigorous development and review standards to drastically improve operation excellence and time to prod, including the reduction of **400** security risks amongst the team's software packages

theScore Bet   **May 2020 – Aug 2020**
Backend Elixir Developer Intern   *Toronto, ON*
- Improved race conditions of app push notification by implementing **NATS** messaging and **Oban** job processing between different services to increase concurrency
- Refactored **3** endpoints into a monolithic **gRPC** API to store and transform bet transaction records to increase expandability of backend architecture and remove duplicate code
- Added the ability to store and manipulate user records, sessions, and wallet activities for theScore's mobile betting experience written with **Ecto** queries and **Elixir**

FreshBooks   **Jan 2020 – Apr 2020**
Fullstack Software Developer Intern   *Toronto, ON*
- Created payments page using **Ember.js** on new FreshBooks platform with ability to review and update invoices to facilitate the transition of **thousands of users** away from the old product
- Developed new API endpoints in payments service to surface relevant data with **Flask** and **SQLAlchemy**
- Applied asynchronous processing of **WePay** Instant Payment Notifications to prevent API overloading

Ada   **May 2019 – Aug 2019**
Full Stack Developer Intern   *Toronto ON*
- Developed interactive charts and tables for analyzing usage trends of customer service chatbot using **Flask, PostgreSQL**, and **React** to aid bot managers in improving flexibility and accuracy of answers
- Increased accuracy of metrics by **40%** on analytics dashboard for international users by applying time zone conversions on queries
- Implemented automated database migration system for an **ELT pipeline** using **Airflow** and **Python**

Education

University of Waterloo   **Sep 2016 – May 2021**
Bachelor of Applied Science in Honours Mechatronics Engineering (Co-op)   *Waterloo ON*
Option in Artificial Intelligence

Universidad Carlos III de Madrid   **Sep 2019 – Dec 2019**
Study Abroad Term   *Madrid ES*