Justin Xu

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OVERVIEW

- takes a careful detail-oriented approach to all work, consistently ensuring well-structured code
- applies strong problem-solving skills to quickly learn unfamiliar technologies and push them beyond ordinary use cases
- **languages:** Python, TypeScript, C++, C, Swift (iOS), Kotlin (Android), Bash, SQL, GraphQL, CSS
- **tools:** Node.js, Express.js, React, Jest, Docker, MongoDB, Airflow, Figma

WORK EXPERIENCE

Apr 2021 – Jan 2021

FairVentures Lab – Solutions Developer
Kitchener, ON (remote)

Python, Bash, TypeScript, Node.js, React, GraphQL, Docker, Airflow

- delivered open-source AI assistants with a focus on making projects developer-friendly, such as by using Docker environment variables to configure dependency injection
- rewrote a collation algorithm to eliminate almost all false positives when extracting insurance claims from scanned loss run documents
- combined image object detection with word2vec to measure the semantic similarity between an image and arbitrary keywords
- designed and deployed an Airflow workflow to run nightly integration tests on an email bot

Aug 2020 – May 2020

Wish – Full Stack Software Engineer Intern
Toronto, ON (remote)

Python, MongoDB, SQL, Grafana, GraphQL, TypeScript, React

- built a GraphQL API for merchants to manage marketing, and integrated it in a React frontend
- implemented an A/B test for quality-of-life improvements, and wrote efficient data aggregation scripts to measure a 7.5% increase in product uploads by affected merchants
- prototyped a custom Pylint checker that suggests field projections for PyMongo queries, to reduce latency and network traffic

Aug 2019 – May 2019

Osellus – Mobile Software Developer
Toronto, ON

Swift (iOS), Kotlin (Android), SQL

- developed native iOS and Android features for a microlearning platform
- reduced client-side processing time by 80% by caching data and improving code efficiency
- nominated by employer for Co-op Student of the Year for extensive commitment to app performance, including independent research on efficient Swift data representation

CURRENT PROJECTS

present – Sep 2020

Loo Labs – Lead Backend Developer (Founding Member)
Waterloo, ON (remote)

TypeScript, Node.js, Express.js, Jest, React, CSS, Figma

- collaborated in a tight-knit team to ideate, prototype, and do user tests for the flagship product *Waterpark*, an app that helps UWaterloo students discover clubs and events
- managing a team of 3 to deliver the *Waterpark* API, with an emphasis on good development practices – research, design documentation, code organization, maintainability, and testing
- creating a fully-typed REST API framework based on Express.js and Domain-Driven Design

EDUCATION

present – Sep 2018

University of Waterloo – Honours Computer Science
Waterloo, ON

Candidate – Bachelor of Computer Science, Statistics Minor (2023)

- 95.28% cumulative average
- CS 241: won the course challenge to implement the most optimal compiler (Winter 2020)