

Jack Pan

4th Year Computer Science Student

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SKILLS

Languages: Python, Javascript/Typescript, HTML, CSS, C++, C, SQL

Technologies: Flask, Tornado, NodeJS, Express, React, Redux, MongoDB, Mongoose, React Native

EXPERIENCE

Wish | Incoming Full Stack Engineer, Payments Engineering | Sep – Dec 2020

Wish | Full Stack Engineer, Payments Engineering | Jan – Apr 2020

- Engineered functionality in **Python** with **Tornado** and **MongoDB** to block orders when user behavior was suspicious; added an admin UI in **React** for non-technical staff to easily configure detection parameters.
- Built a system to unban certain users deemed unlikely to offend again, increasing GMV by **\$120K per month**.
- Implemented a flow in **Python** with **Tornado** and **MongoDB** to retry processing failed payments from customers under special conditions, with a projected recovery of **\$45 million annually**.
- Developed features and fixed bugs to improve payments processing flow, reduce customer fraud, and enhance the user checkout experience – leading to impacts like a **7% growth** in orders by promoting multi-installment payments.

D2L | Software Developer | May – Aug 2019

- Improved a **Python** NLP algorithm for generating test questions based on the content of input text, increasing the yield of acceptable questions by **~60%**.
- Designed and executed a zero-downtime migration of a staging **MongoDB** database to a new **Mongoose** schema.
- Implemented major user features, such as freehand drawing and highlighting, for an in-browser PDF editor using **React** with **Redux** in **Typescript**.
- Built crucial functionality using **Express** with **NodeJS** and **MongoDB** for users to upload, edit, and save documents.

DragonAgile | Software Developer | May – Aug 2018

- Developed a full-stack web app for managing Perforce user permissions using **React**, **NodeJS**, and **Java**.
- Designed and built various plugins according to client specifications for Jira and Confluence using **Java**.

PROJECTS

Classwatch | React, Typescript, NodeJS, Express, MongoDB

- Web app that scrapes UW class registries and notifies users if a “watched” class has a spot open for enrolment.
- Obtained **+1500 users** and highly positive feedback.

Ceci | Python

- Interpreter for a unique programming language built from scratch; includes programming staples such as variable assignment, control flow statements, and mathematical evaluation along with novel features of my own design.
- Followed language design principles to design and build a context-free grammar, lexer, LL(1) parser, and evaluator.

AWARDS

- PennApps Best AR/VR Project, 2019
- Hack the 6ix Finalist, 2018
- Dean’s Honour’s List, 2019-2020

EDUCATION

University of Waterloo

Bachelor of Computer Science, 2017-2022

cGPA: 89%