Jack Pan

4A Computer Science Student

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SKILLS

Languages: Python, JavaScript, TypeScript, Go, SQL, C++, C, HTML, CSS
Technologies: Flask, Tornado, NodeJS, Express, React, Redux, MongoDB

EXPERIENCE

Wish | Software Engineer, Product Payments | Sep – Dec 2020
- Designed and built a data aggregation pipeline in **Python** and **SQL** to automatically generate financial reports from internal data, **meeting a critical auditing requirement for the company's IPO**
- Built urgent defensive measures against a sudden attack by fraudsters, **preventing >$667K in losses**
- Implemented a suite of anti-fraud logic to detect and stop malicious behavior throughout the payment collection lifecycle – reducing the daily number of failed billing info requests by **>40%**

Wish | Software Engineer, Product Payments | Jan – Apr 2020
- Implemented a central vault for storing processed customer billing information, allowing a retry of failed payments from customers under special conditions with a projected recovery of **$45 million annually**
- Engineered functionality in **Python** with **Tornado** and **MongoDB** to block orders when user behavior was suspicious; included an admin UI in **React** for non-technical staff to easily configure detection parameters
- Developed features and bugfixes related to the payments processing flow using **Python**, **React**, and **MongoDB**; with results like an increase in GMV by **$120K per month** through a forgiveness system for banned users

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%**
- Implemented major features such as freehand drawing and highlighting for an in-browser PDF editor using **React**
- 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 enrollment
- Obtained **+1500 users** and highly positive feedback

Chess DLC | Go, React, TypeScript
- Web client for a self-designed variant of chess with new rules and logic built from scratch – users can freely create and invite each other to self-contained "game rooms" where matches are played out
- Runs a RESTful server with concurrently managed websockets to provide realtime updates to simultaneous games

AWARDS

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

EDUCATION

University of Waterloo
Bachelor of Computer Science, 2017-2022
cGPA: 89%