

ROBBY (XI) QIU

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EDUCATION

University of Pennsylvania

Master of Computer and Information Technology

exp. May 2023

- Cumulative GPA: 4.0/4.0
- *Ongoing Coursework:* Data Structures, Algorithms, Web Development, Database, Machine Learning, Theory of Computation, Computer Architecture, Operating Systems, Internet and Web Systems, Computer Graphics

University of Oxford

BA Hons Philosophy, Politics and Economics

Jul. 2019

- Overall Honours Classification: First Class – GPA equivalent: 4.0

WORK EXPERIENCE

PayPal

Software Engineer Intern

San Jose, CA | Jun. 2022 – Aug. 2022

- Decoupled code and content for PayPal Shopping's codebase and integrated WorldReady Service (PayPal's localization package) to store and serve content remotely; enabled live update for content change and reduced release latency by 50%
- Created command-line tool that generates consistent JSON payload for piping through hash functions; published the tool as open-source npm module and received 100+ downloads in the first week
- Completed 5 tickets in bi-weekly sprints that implement new features or fix bugs in the codebase

Second State

Software Engineer Intern

Beijing, China | Jun. 2021 – Aug. 2021

- Used Docker to containerize TensorFlow models powered by WasmEdge (Second State's WebAssembly virtual machine) and deployed service on AWS Lambda and Tencent SCF; wrote detailed tutorial on CNCF's blog
- Developed chatbot prototypes with Rust and deployed on WasmEdge-powered FaaS platform to showcase its speed and convenience; created user documentation on usage of the platform with code examples
- Researched on integration of WasmEdge in smart cars (with tools from the Erdos Project) and development of WebAssembly containers (with CRI-O)

ByteDance

Product Manager Intern

Beijing, China | Dec. 2020 – Apr. 2021

- Collaborated with engineering team on designing credit system for TikTok advertisers; used Pandas and Matplotlib to validate the system and visualize credit score distribution
- Processed and analyzed behavioral data of advertisers with SQL and Python to detect traits that mark off risky advertisers; implemented corresponding risk-control features and reduced key risk metrics by 60%
- Built shared monitoring dashboards for key risk metrics to accelerate information transmission between engineering, operations, and sales teams

PROJECTS

Face Analysis iOS Application | SwiftUI, CoreML, Vision

Jan. 2022

- Developed an iOS APP that extracts faces in a photo and shows predicted age, gender, and emotion for each face
- Implemented CoreML machine learning models on iOS with SwiftUI; detected and cropped faces with Vision, Apple's built-in framework for computer vision

Full-Stack Social Network Application | React, Express, MongoDB, Heroku

Sep. 2021 – Dec. 2021

- Created Reddit-like social network website in team of 3 under the Scrum framework and deployed through Heroku
- Built front-end with React & MUI and back-end with Express & MongoDB; tested with Jest and Cypress
- Independently implemented in-APP synchronous chatting that supports image, audio, and video; built the feature through polling, file streaming with Multer, and file storage with MongoDB GridFS

Wechat Mini-APP for Education | React, Spring Boot, MySQL

Apr. 2020 – Now

- Designed and developed Wechat Mini-APP for Project Nous (NGO for equal access to education); frequently used by 80+ volunteers and 400+ students for program application, admission, and course registration
- Built front-end with React and backend with Spring Boot; collaborated in team of 3 through GitHub and Slack

PROGRAMMING SKILLS

Languages: Python, Java, C, C++, JavaScript, HTML/CSS, Rust, Swift

Tools: Git, Linux, Docker, Node.js, React, Cypress, SwiftUI

Big Data: MySQL, MongoDB, Pandas, Matplotlib, Seaborn, TensorFlow

LANGUAGES & INTEREST

Chinese: Native

English: Proficient

Hiking: Experience in high-altitude hikes

Rock-Climbing: Intermediate - V5&5.11c