

# 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