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, OS, Distributed 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* | **May. 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 plaform 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 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 back-end 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, OpenGL
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