

Runze Zhang

+1(617) 460-9651 | rz387@cornell.edu | <https://github.com/runzeeee>

EDUCATION

Cornell Tech

Incoming for May 2023

Master of Engineering in Computer Science

Boston University

Sep 2019 – Aug 2022

Bachelor of Arts in Computer Science

GPA: 3.62/4.0

- **Related Courses:** Full Stack Development, Computational Fabrication, Theory of Computation, Computer Systems, Concepts of Programming Languages, Information Security
- **Tutoring Experience:** Undergraduate TA for Geometric Algorithms

TECHNICAL SKILLS

Program Languages: Python, Java, TypeScript, JavaScript, SQL, HTML, CSS

Frameworks & Tools: Git, Linux, MySQL, Redis, Firebase, Node.js, Angular, Android Studio, Jenkins

WORK EXPERIENCE

Software Development Engineer Intern

Jun 2021 - Aug 2021

TELD New Energy Co., Ltd

Qingdao, Shandong

- Spearheaded a daily coupon rush feature for TELD Mobile App. In a coupon rush event, hundreds of discount vouchers will be distributed in 15 seconds, and over five thousand App users can concurrently participate in the campaign. Improved daily active user rate by 20%.
- Single-handedly developed both the front-end and server-side infrastructure for the new feature, including UI using **Android Studio**, server-side transaction cache using **Redis**, and coupon inventory store using **MySQL**.
- Optimized system performance while guaranteed transaction atomicity by implementing **Redis distributed locking**. Stress-tested the system and deployed to production with peak throughput of 5000 TPS.

Software Development Engineer Intern

Jun 2020 - Aug 2020

Huatong Group

Qingdao, Shandong

- Led the development of an electric car IOT platform for local EV enterprises to securely submit car position and status data for centralized analysis.
- Built the authentication and user role infrastructure to secure file transfer, including the the UI login page and private route, the **JWT middleware** for **Express API** endpoints, and the **MySQL** user and profile schema.
- Delivered frontend UI written in **TypeScript** using **Angular**. Facilitated development by spearheading a **Jenkins** CI pipeline to continuously deploy the website changes to Alibaba Cloud.

PERSONAL PROJECTS

Android Development - Livingood

project 都最好加一下日期哦

- Worked as a team leader for an App to find the best apartment from four aspects: Safety, Transportation, Entertainment, and Food. Hosted weekly stand-ups, sprints, retrospectives, and evaluations as a scrum master.
- Developed a backend apartment rating system in **Java** that used **Retrofit** to safely interact with CrimeOmeter API for crime rate, Realty Mole Property API for rental statistics, and Google Places API for locations of transit and restaurant. Weighted each metric to generate scores for each apartment.
- Optimized system performance by reducing the number of API requests. Invented an algorithm to fetch data for the entire neighborhood and then assign data to each apartment based on geometric calculation.

Computational Fabrication - Connective Marble Race

- Utilized **Pygame** component to create a user-friendly interface for **3D printing**, where users can design multi-layer marble tracks by drawing on UI side layer by layer.
- Estimated the marble travel time by kinetic calculations and rendered travel trajectory on the UI. The sketched design would be exported as CAD files and later STL files for 3D printing through Onshape API.

Car Rental System

- Drafted **Design Docs** including database ER model, domain model, and system sequence model diagrams for the backend. Integrated strategy pattern in backend system design to make it more extensible for future development.
- Implemented features to track the entire car rental process for both the company and customers. Re-designed the **MySQL** database schema to accommodate for new business needs of gathering car, customer and revenue data.