

Bixin Zhang

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Objective

Passionate about learning, improving, and building solutions for real-world problems.

Education

Cornell University, B.S. in Computer Science

Aug 2019 - Dec 2022

Ithaca, NY

Selected Coursework: Object-Oriented Programming and Data Structures, Design and Programming for the Web, Functional Programming, C++ Programming, Probability models and inference, Analysis of Algorithms, Unix and Scripting | **In Progress:** Intro to Machine Learning, Computer System Organization, Computer Networks

Experience

Backend Developer, Cornell Course Management System

Aug 2020 – Present

- Implement APIs interacting with JPA/MySQL using Java, connect endpoints to front-end using TypeScript and JSON, and conduct integration tests and unit tests using Mockito to ensure proper functionality.
- To increase system scalability and maintainability, refactored over 1000+ LOC using dependency injection and adding test units. The system is used by over 8,000 students from 40+ courses.

Front-end Developer, Application portal @DreamCorps

Dec 2020 - Jan 2021

- Developed intuitive and mobile-friendly front-end interface for admin-side and applicant-side application page using JavaScript, React.js, Redux, and Material-UI.
- Used server-side rendering and lazy loading to improve performance on application view; Created reusable components to speed up development process.
- Designed, implemented, and refactored a many-to-many relational database to efficiently support application storing, removing, searching, status changing, and grouping.

Projects

Mahjong

Oct - Dec 2020

- Utilizing principles of test driven development, modularization, and encapsulation, implemented and tested all playing and scoring rules of Mahjong in OCaml from the ground up.
- Researched and implemented the victory validation algorithms with a teammate.
- Developed support to help player memorize tiles discarded by each player and the rules of the game.

Eathaca

Aug - Sept 2020

- To promote sustainability through food waste minimization, researched and implemented the following features: grocery expiration management, variety user types, recipe search based on existing groceries, public posts using Java and XML in Android Studio.
- Deploy the app on Firebase to support user authentication and data synchronization storage in real-time.

Leadership & Volunteer Experience

Co-Founder, ArtForChange Organization

September 2018 - May 2020

- To tackle the challenge of lack of in-person experience because of Covid-19, built a web application to facilitate artwork auctions with HTML, CSS, JavaScript, and PHP by showcasing artworks and their statuses.
- Led a team of 3 to collect art donations from students, faculties and local artists.
- Consolidated over 50 meetings and art workshops through close communication with supervisors and members.

Volunteer at Girls Who Code

December 2018 - May 2019

- Collaborated with a team of 7 to deliver workshops aiming to empower young females to explore the field of Computer Science.
- Mentored local students with projects in Python including brain-storming project ideas, defining project scope, and identifying related technical topics

Skills

- **Programming and Styling Languages:** Python, C++Java, TypeScript, JavaScript, PHP, HTML, CSS
- **Technologies and Frameworks:** React.js, SQL, Android Studio, Git, Docker, Linux