

Shiyan Chen

Full-Stack Software Developer | San José, CA
Portfolio - <https://shiyan-chen.github.io/>

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PROJECTS

01. Django Twitter Backend Service

- Built low-latency SNS backend using Python, Django & RESTful API.
- Used Push model to fan out news feeds.
- Implemented Endless Pagination for mobile-friendly user experience.
- Reduced database queries for read-heavy tables using Redis & Memcached.
- Used Denormalization to store numbers of comments and likes to reduce queries.
- Improved database query performance of friendships and newsfeeds by adopting HBase to support range queries.
- Reduced response time by leveraging Redis as Message Queue to deliver asynchronous tasks.
- Committed over 10000 lines of code changes and spent over 3 months to finish.

02. ShopMe E-Commerce Website

- Built full-stack e-commerce website using Java, Spring Boot & MySQL.
- Designed and built dynamic, responsive, and mobile-friendly webpages using HTML, CSS, Javascript, jQuery, Thymeleaf & Bootstrap.
- Implemented social login with Facebook and Google using Spring OAuth.
- Integrated PayPal Checkout API to capture payments from customers.
- Integrated Google Chart API to realize data visualization of sales reports.
- Implemented email reminder for customer registration and order confirmation using Spring Mail.

03. Unworried Store Mobile App

- Led three-person team to develop Android mobile app for recording and sharing daily worries using Java, Android Studio & Google Firebase.
- Implemented user login and registration using Firebase Authentication.
- Used Firebase Realtime Database to store and manage user profiles, worry records, friend lists and chat messages.
- Implemented notification push using Firebase Cloud Messaging.

04. Floor Plan Evaluation Website

- Designed and Built frontend webpage using React.js, Javascript, HTML & CSS.
- Built backend service for evaluation of floor plans using Python & Flask.
- Implemented interactive display of floor plans using JS library Leaflet.

05. Distributed Document Search System

- Developed frontend server loosely coupled with search cluster using Java, Javascript, HTML & CSS.
- Built dynamic, fault-tolerant, and scalable search cluster by adopting Zookeeper and leader election algorithm.
- Implemented and parallelized the TF-IDF algorithm to evaluate relativity between words and documents.

SKILLS

Programming Languages

Python, Java, C, C++, Javascript, HTML, CSS, Bash

Databases

MySQL, MongoDB, HBase, Redis, Memcached

Frameworks & Libraries

Django, Spring Boot, React.js, Flask, jQuery, Thymeleaf, Bootstrap, RESTful API

Platforms & Tools

AWS, Google Firebase, Heroku, Android Studio, Zookeeper, Docker, Linux, Git

Design

Figma, Adobe Photoshop, Adobe Illustrator, Adobe InDesign

EDUCATION

Northeastern University

09/2021 - 05/2024 | San José, CA
Master of Science in Computer Science
• GPA: 4.0/4.0

University of California, Berkeley

08/2020 - 05/2021 | Berkeley, CA
Master of Advanced Architectural Design
• GPA: 3.96/4.0

EXPERIENCE

Graduate Teaching Assistant @ NEU

- 05/2022 - Present | San José, CA
- Worked as TA for CS5004 (Object-Oriented Design) and CS5010 (Programming Design Paradigm).
 - Led weekly lab of 30+ students to guide them complete projects. Hosted weekly review sessions for concept recap and office hours for debugging.

HONORS

- Eleven Magazine, First Prize of International Architecture and Design Competition (2018).