

# Portfolio

The Chinese version can be found [here](#).

The PDF file can be found [here](#).

This collection of software represents the diverse projects I have had the privilege to work on throughout the years, in collaboration with various esteemed companies and partners.

I am grateful for the opportunities and experiences these collaborations have provided, and I look forward to continuing to contribute my skills and expertise to future endeavors.

## **Uva & Codeforces, Java & C++, 2008-2013 & 2021**

Solved around 1000 algorithm problems on the online judge.

Uva Online Judge record is [here](#).

The range of algorithm problems I've solved encompasses various areas, including data structures, graph, mathematics, string processing, geometry and several other advanced or specialized topics.

## **Flower Recognition, Android, 2014.4 - 2014.8**

Developed a flower recognition Android application designed to help users identify flowers by capturing photos and drawing circles to aid in recognition.

**Technologies Used:** Android SDK, Java

**Responsibilities:** - Implemented the image recognition functionality. - Designed and developed the user interface. - Integrated the photo capture and processing features.

Open sourced at [GitHub](#), 33 commits.

## **iword, Android, 2014.3**

An Android application to help users learn English by watching movie clips.

**Technologies Used:** Android SDK, Java

**Responsibilities:** - Developed the movie clip playback and learning interface. - Implemented features to improve vocabulary and comprehension through interactive content.

**Achievements:** Won Third Prize in the 2014 AVOS Cloud Hackathon.

SegmentFault: Review of the 2014 AVOS Cloud Hackathon Achievements

## **Bjfu Assistant, Android, 2014.1 - 2014.6**

A campus assistant Android application that integrates functions like checking grades and participating in alumni forums.

**Technologies Used:** Android SDK, Java

**Responsibilities:** - Developed core functionalities such as grade checking and forum participation. - Designed and implemented the user interface. - Achieved widespread use with around 3500 users at Beijing Forestry University.

## **LeanChat, Android, 2014.7 - 2014.12**

LeanChat is a chat application that includes features such as friend management, group management, location-based messaging, nearby people, personal profiles, and login/register functions, all fully utilizing LeanCloud' s storage and communication capabilities.

**Technologies Used:** Android SDK, Java, LeanCloud

**Responsibilities:** - Developed friend management, group management, and location-based messaging features. - Implemented personal profiles and login/register functions. - Leveraged LeanCloud' s storage and communication capabilities.

Open sourced at GitHub, 412 commits.

## **LeanChat, iOS, 2015.1 - 2015.10**

Developed the iOS version of LeanChat, a chat application that utilizes LeanCloud' s backend services for messaging and storage.

**Technologies Used:** iOS SDK, Objective-C, LeanCloud

**Responsibilities:** - Built friend and group management functionalities. - Created location-based messaging and nearby people features. - Designed personal profiles and login/register screens.

Open sourced at GitHub, 446 commits.

## **LeanCloud Java SDK & Objective-C SDK, 2015.4 - 2015.10**

Participated in the development of LeanCloud' s Java SDK and Objective-C SDK, providing developers with tools to easily integrate LeanCloud services into their applications.

**Technologies Used:** Java, Objective-C, LeanCloud

**Responsibilities:** - Contributing to the development of LeanCloud' s Java SDK and Objective-C SDK. - Ensuring seamless integration of LeanCloud services such as object storage, file storage, and messaging.

Objective-C SDK documentation and Java SDK documentation.

## **TabsKiller, Frontend, 2015.7**

Developed a Chrome plugin that automatically closes the oldest tabs when the browser gets cluttered with too many tabs, improving browser performance and user experience.

**Technologies Used:** JavaScript, Chrome API

Open Sourced at GitHub, 19 commits.

## **Reveal-In-GitHub, MacOS, 2015.10**

Created an Xcode plugin designed for seamless navigation to key GitHub functionalities within the current repository. The plugin allows users to quickly access GitHub History, Blame, Pull Requests, Issues, and Notifications.

**Technologies Used:** Objective-C, Xcode Plugin API

Open Sourced at GitHub, 57 commits.

## **CodeReview, Full Stack, 2015.11 - 2016.7**

CodeReview is a professional platform for code review, communication, and sharing. Engineers can submit their code for expert review to improve the quality of their code.

**Technologies Used:** PHP, Vue.js, CodeIgniter, Alibaba Cloud

**Responsibilities:** - Developed the backend using PHP and CodeIgniter. - Implemented frontend features with Vue.js. - Integrated with Alibaba Cloud for scalable and reliable infrastructure. - Handled user management, code submission and review processes, notification systems, payment integration, and event/workshop management.

Open Sourced at GitHub.

- code-review-server, 275 commits
- code-review-web, 488 commits (302 commits by me)

## **Fun Live, Full Stack, 2016.6 - 2017.12**

Fun Live is a knowledge live broadcast platform where users can participate in various knowledge lectures such as programming or design. Users can pay fees to attend live sessions or reward the lecturer.

**Technologies Used:** PHP, MySQL, Vue.js, CodeIgniter, Alibaba Cloud, SRS streaming, WeChat SDK

**Responsibilities:** - Developed most of the backend and frontend code. - Integrated the OBS tool for live streaming. - Implemented user registration, payment, and notification functionalities. - Achieved significant user engagement with around 30000 users and millions of page views.

Open Sourced at GitHub.

- live-server, 661 commits (555 commits by me)
- live-mobile-web, 528 commits (426 commits by me)
- live-web, 140 commits
- live-wxapp, 63 commits

Mobile website:

WeChat MiniProgram:

Desktop website:

## Mianbao Live, Backend, 2017.10 - 2017.12

Mianbao Live is a one-stop content monetization and social economy solution provider.

**Technologies Used:** PHP, Laravel, TypeScript, Go

**Responsibilities:** - Refactored the backend to consolidate logic from multiple languages into one. - Improved performance, stability, and user experience. - Implemented server-side development using Laravel.

## The WeChat Miniprogram for Super Brain program, Full Stack, 2018.3 - 2018.4

Developed the WeChat Mini Program for Jiangsu TV's Super Brain program, featuring engaging puzzles for users. Hosts navigate users through oral broadcasts, presenting specific technical challenges.

**Technologies Used:** Java, Spring, Redis, Alibaba Cloud, WeChat DevTools

**Responsibilities:** - Developed backend services using Java and Spring. - Implemented frontend components using WeChat Mini Program framework. - Ensured high performance and reliability under high concurrency using Redis.

## Chongding, Full Stack, 2017.9 - 2018.1

Chongding is a mobile trivia app similar to HQ Trivia, allowing users to participate in live trivia games with prize money.

**Technologies Used:** Java, Spring, Redis, Kafka, Zookeeper, WebSocket, Socket.IO

**Responsibilities:** - Developed backend services and admin panel frontend. - Designed and implemented real-time trivia game functionalities. - Contributed to the technical solution for synchronizing live streaming

with game events using SEI (Supplemental Enhancement Information).

## **Square Root Inc - 50 miscellaneous projects, Project Management & Some Software Development, 2018.1 - 2019.12**

Managed and developed 50 miscellaneous projects for Square Root Inc, including websites, games, and WeChat mini programs.

**Technologies Used:** Various based on project requirements

**Responsibilities:** - Managed project negotiations, team coordination, and client communications. - Contributed to software development for various projects. - Ensured timely delivery and high-quality outcomes for clients.

(Responsible for Project Management)

## **ShowMeBug - Enterprise WeChat Entrance, Full Stack, 2021.7 - 2021.9**

ShowMeBug is a technology competence assessment platform that supports practical programming, enabling efficient and accurate assessment and recruitment of technical talents.

Integrated ShowMeBug with Enterprise WeChat, enabling seamless access to technical interview tools within the Enterprise WeChat ecosystem.

**Technologies Used:** Ruby, PostgreSQL, WeChat SDK, Docker

**Responsibilities:** - Developed integration features for login and interview access. - Conducted technical research on constructing programming environments in a browser using Docker.

## **LvchenSign, Frontend, 2020.4 - 2020.5**

LvchenSign specializes in the production of advertising signage for various businesses and events. With a focus on quality and creativity, it strives to deliver impactful visual solutions that elevate brands and captivate audiences.

Developed the frontend for LvchenSign, a website specializing in the production of advertising signage.

**Technologies Used:** HTML, JavaScript, CSS, Bootstrap

**Responsibilities:** - Designed and implemented the website's frontend. - Created an intuitive and user-friendly interface for showcasing products.

Open sourced at GitHub, 40 commits. Online page at lvchesign.com.

## **DBS Client Connect - Equity Trading, Backend, 2021.12 - 2022.6**

Contributed to DBS Client Connect, an AI- and data-driven customer-relationship management platform, focusing on equity trading micro-services.

**Technologies Used:** Java, Spring Cloud, Jenkins, Pivotal Cloud Foundry

**Responsibilities:** - Developed backend services for equity trading. Created functionalities for equities display, customer display, pre-trade checks, and order placement. - Integrated Avaloq APIs to enhance the underlying infrastructure and improve user experience.

Image source: eddytandesign

## **DBS DigiBank CN - Mutual Funds, Backend, 2022.7-2022.11**

DBS DigiBank CN rethought and redesigned for you to enjoy the faster and more convenient way to bank on the go.

Contributed to DBS DigiBank CN, focusing on backend development for mutual funds micro-services as part of a collaborative team.

**Technologies Used:** Java, Spring Cloud, Jenkins, Pivotal Cloud Foundry, Kibana

**Responsibilities:** - Enhanced functionalities for subscribing to and redeeming mutual funds, improving user experience and system reliability. - Fixed bugs and enhanced code for the microservices related to structured investment products, investment portfolio, and transaction list, contributing to overall system stability and accuracy. - Conducted performance tests and analyzed logs to generate reports on QPS, collaborating with team members to optimize performance. - Developed a tool to automate test generation for the testing tool Karate, which streamlined the testing process and improved test coverage.

Image source: DBS Digibank CN

## **PayMe By HSBC - Auto Top Up, Backend, 2022.12 - 2023.7**

PayMe from HSBC is a convenient way to send payments to friends, and make mobile payments to merchants both on and offline.

**Technologies Used:** Java, Spring, Kafka, Azure, Azure DevOps, AWS

**Responsibilities:** - Worked with a team of backend engineers to develop the Auto Top Up feature, which automatically tops up funds from the user's credit or debit card when the balance falls below a certain amount. - Collaboratively monitored post-payment events from Azure EventHub, ensuring seamless integration and checking for top-ups whenever a user set up their auto top-up configuration. - Applied object-oriented programming principles to handle cases elegantly, and utilized aspect-oriented programming to audit logs for

changes in the auto top-up table. - Assisted the team during the AWS migration process, troubleshooting IAM and RDS configurations to ensure a smooth transition.

Image Source: PayMe By HSBC

### **AI-Powered Story Bot, Full Stack, 2023.05 - 2023.07**

Contributed to the development of an AI-powered story bot using Claude's API for personalized stories.

**Technologies Used:** Python, Flask, React, Nginx, AWS, Prometheus, ELK stack, ChatGPT-4

**Responsibilities:** - Developed backend with Flask and integrated Claude's API. - Built frontend with React for prompt setting and management. - Deployed on AWS and used Nginx for secure communication. - Implemented Prometheus for monitoring and ELK stack for log management. - Implemented end-to-end trace ID solution for tracking requests across the system.