

# YIFEI CEN

## Education

### Carnegie Mellon University

B.S. in Computer Science, Double Majoring in Statistics

Aug 2018 ~ May 2022

Cumulative GPA: 3.89/4.0

Sep 2015 ~ May 2018

### Shanghai Weiyu High School

International Baccalaureate Diploma

## Work Experience

### Gerzz Interactive Back End Developer <Language: Go>

Feb 2021 ~ Aug 2021

Project: Halo - Online Murder Mystery Application

May 2021 ~ Aug 2021

- Implement a message-queue service to accepting requests for each script-play gaming room so that each player in the room is able to search clue, enter sub-chatroom asynchronously.
- Implement strategy to allow for reconnecting to the original gaming room after disconnection by routinely updating essential data in the gaming room to database.
- Design configurations for each drama script in order to store static information such as clues, scenes, background music in database.
- Use Redis to record each user's online status by updating redis key each time a user sends a request to server.
- Use MySql and Redis to record each user's following and followed list by inserting follow data to MySql and adding following/followed user id to zset. Implement method to automatically retrieve the following, followed list from MySql and Redis back to server each time when a user login to the application.

### Project: Juhuipin - WeChat Mini Application

Feb 2021 ~ May 2021

- Build an algorithm for recommending activities for each user on plaza. The recommendation system is based on the frequency of user clicking into different categorical events.
- Add notification feature to the mini app so that (1) when one user asks to join in an activity, the event holder is able to be notified, and respond to the application (2) when holder replied to the application, the user is able to be notified for the result of the application (3) when event is beginning in less than one hour, all event participants get notified (4) when event cancels, all event participants get notified.
- Add local cache system for storing all activities, user information and plaza information in order to reduce the stress of MySQL. Plan to transfer local cache to redis so that the information stored in local cache stay in case of server crashes.

### Tencent Back End Developer <Language: Go>

Dec 2020 ~ Feb 2021

- Build Local Network Interface for a service. Allow certain material corresponded REDIS data value to be cleared (both hash key value and string key value) when service switch from pre environment to formal environment.
- Implement local cache feature in various downstream services in order to store commonly accessed data in local cache instead of frequently fetching data from Redis. Improve efficiency and prevent docker from failing due to large flow of data. Modify local cache configuration in formal environment based on docker memory.
- Transfer several publish services from old RPC framework to new RPC framework for better efficiency, add related unit tests. Monitor log outputs and keep track of error messages. Locate error and Edit paragraphs in service that might cause service to panic.
- Improve code styles: Enable some constant variables (e.g. REDIS server address, REDIS server password) to read values from configuration to prevent hijacking private information and to incorporate configuration modifications; Categorize different types of error and print categorized error codes on logs to improve debug effectiveness.

### Shanghai Jiao Tong University Research Assistant <Language: Python>

May 2019 ~ July 2019

- Interpreted facial recognition calculations
- Trained sample faces in face dataset using support vector machine

### Sanli International Education Teaching Assistant

June 2018 ~ Aug 2018

- Tutored a class of PSAT students through content reviews and vocabulary recitation
- Graded student's mock test papers and corrected daily homework assignments

## Related Coursework

### 15440: Distributed Systems <Language: Go>

- **Distributed Bitcoin Miner** Implemented the Live Sequence Protocol with a creating a system that can handle lost, duplicated, or corrupted Internet packets, as well as failing clients and servers by exponential back-off approach.
- **The Raft Consensus Algorithm** Implemented the replicated state machine protocol. Replication allows the service to continue operating even if some of its replicas experience failures

### 15213: Introduction to Computer Systems <Language: C>

- **Proxy Lab** Implemented a web proxy server that acts as an intermediary between clients and servers with cache features to store uri and server responses
- **Malloc Lab** Implemented a dynamic memory allocator which uses a list of doubly linked segregated list to store free memory blocks