Chang Huang

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Self-Summary

- Languages: C++, Java, Python, Markdown
- Technologies / Frameworks: MySQL, Redis, Unity 3D, Blender, Git / Spring Boot, Spring, PyTorch, TensorFlow

Education

Rutgers University (New Brunswick) **Sept. 2022 - May. 2024**

- **Degree:** MS in Computer Engineering **GPA:** 3.58 / 4.0
- **Activity:** Grader (Analog Electronics course)

Tiangong University (China) **Sept. 2018 - Jun. 2022**

- **Degree:** BS in Applied Physics **GPA:** 3.34 / 4.0
- **Honor:** Excellent Student Leader (2018 - 2021)

Experience

Tsingke Zhirong Technology Co., Ltd. (China) **Jul. 2023 - Sept. 2023**

Software Development Engineer Intern

AI avatar Lanka (WeChat applet):

- Efficient Cache Management: Leveraged Google Guava to develop an advanced cache management system. This strategy substantially decreased database load, ensuring quick access to updated model lists during user login.Consequently, achieved optimized performance for a fixed model list, enhancing user experience through image preloading prioritization and faster text content display.
- Database Mapping: Successfully mapped interface entity classes and Mapper file fields for 12 database tables. This strategic mapping facilitated seamless CRUD operations and streamlined the testing process through Swagger.
- Cloud Integration: Oversaw the data upload process to Alibaba Cloud's Object Storage Service (OSS). Collaborated intensively with the front-end team for interface troubleshooting. Furthermore, utilized WeChat developer tools for thorough testing, improving the avatar functionality.
- User-Based Billing Function: Implemented user-based charging functionality by integrating the WeChat Payment SDK. This integration encompassed WeChat user registration verification, enabling precise tracking of user usage and billing.
- Payment Notification Feature: Crafted visually engaging Feishu cards and harnessed Feishu's custom reminder bot, established an efficient payment notification feature for Mini Program administers.
- Verification Code Management: Employed the Alibaba Cloud platform for dispatching random user verification codes, securely stored in the database and swiftly relayed to the front-end for authentication purposes.

PROJECTS

Interactive FPS Game **Feb. 2023 - May. 2023**

- Background: A FPS game that use keyboard and mouse to control and shoot AI enemies, finally transplant it to VR device.
- Designed a Unity 3D environment featuring a vast map with dynamic weather patterns and adaptive lighting. Created character and AI models using Blender. Developed three weapon models (rifle, sniper rifle, and pistol) with C# and UGUI, enabling realistic shooting mechanics and sound effects.

Stock Market Prediction **Jul. 2021 - Aug. 2021**

- Background: Implement BP neural network in LMS algorithm to predict stock trends for Apple and Tesla.
- Utilized Python with modules like Sklearn and Keras to import, preprocess, and split CSV datasets for stock trend prediction. Built neural networks with specified Optimizer, Loss, and Metrics, and successfully demonstrated improved model performance through accurate stock trend predictions.
- Publication: *Stock Market Forecasting Based on Neural Networks*, SPIE 12079.

Online Order Restaurant **Sept. 2022 – Feb. 2023**

- Background: Online food ordering website where users can register, select menus, place their orders and provide feedback about specific dishes. Additionally, the website has payment integration to facilitate user transactions.
- Backend: Java Springboot utilized Mybatis-plus and Swagger for database connectivity with Alibaba's DruidDataSource. Frontend: CSS and JavaScript are utilized to layout the website design with an additional custom toolbar to provide options such as title background color, list layout distribution, and font.