Brian Han

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EDUCATION

Shanghai Jiao Tong University   Shanghai, China

- *Bachelor of Science in Software Engineering;*

  Courses covered: Computer Systems, Algorithm, Machine Learning, Web Development
  Sept. 2019 to Jul. 2023

HONORS

- **Shanghai Government Scholarship**   2020.5, 2021.5

TECHNICAL SKILLS

- **Programming**: C, C++, Python(ML, Scripts for Web), Kotlin/JavaScript(front), Java, C#;
- **Web Development**: HTML, CSS, React, React-Native, Spring-boot, Django;
- **Data Management**: MySQL, MongoDB, Redis;
- **Digital Media Development**: OpenGL, Unity 3D, Qt;
- **DevOps**: Git, Nginx, Hadoop, UML;

PROJECTS

- **Betrayal at house on the hill——Unity Game Project for SE123: Principle and practice of SE**
  UI Designer & Multiplayer/Network Developer
    - **Introduction**: The PC version of the well-known Board Game: Betrayal at house on the hill, implemented multiplayer-gaming on a Local Area Network(LAN)
    - **UI Designer**: Designed the user interface of Main Game Scene, Character-Selecting, Multiplayer Lobby and implemented with Unity.
    - **Multiplayer/Network Programming**: Programmed network scripts in C# and built the client-server platform that multi-players can execute and see the corresponding action through LAN.

- **Advanced E-book——Web Application Project for SE367: Architecture of Enterprise Applications**
  Full-Stack Developer
    - **Introduction:**: React + Spring Boot + MySQL/MongoDB based online bookstore mall website.
    - **JMS**: Used JMS to implement the order placement message queue. Asynchronous processing of requests from users for back-end consumer to complete the transaction during the idle period. Improve the efficiency of order placement and throughput.
    - **Lucene**: The Lucene full-text search engine indexes the text of book profiles, allowing users to perform full-text searches quickly and efficiently.
    - **Redis**: Using Redis as a cache for book information greatly reduces the pressure on the MySQL database and improves access speed and stability.
    - **Clustering**: Built an cluster of the bookstore applications with 1 nginx instance (load balancing) + 1 Redis instance (storing sessions) + 2 Tomcat instances(M-S Backups for MySQL).

- **Q&A bot——Summer-semester Project in the School of Software**
  Team Leader & Front-End Developer & Back-End Developer
    - **Introduction**: React Native + Django + chatterbot + SQLite based Q&A Android app. In addition to QA function, app provides API purchase&access service for developers and words frequency statistics for users.
    - **Front-End**: Designed the Chat Page UI that saves and displays the messages queue, implemented with React Native.
      Designed the UI for developers to purchase and view API, implemented with React Native.
    - **Architecture**: Designed C/S architecture with built-in MVC structure, modeling it in UML.
    - **NLP**: Use a Q&A bot framework trained by the LSTM neural network model(chatterbot). The model was trained by questions and answers and returned appropriate answers based on confidence levels.
      The messages sent by users were analysed statistically by Jieba and then filtered for meaningless phrases.
    - **Spider**: Programmed Scrapy scripts for the spider that grabs the relevant answers from zhihu when the model cannot give a satisfactory answer.