

GUANHUA CHEN

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EDUCATION

DUKE University

M.S. in Electrical & Computer Engineering
GPA: 3.57/4.0

August 2019 - Present

Huazhong University of Science and Technology

B.S. in Electrical & Computer Engineering
GPA: 3.75/4.0

September 2015 - June 2019

PROJECTS

Conquer

February 2020 - March 2020

Team project: Java, Android, JUnit, Gradle, PostgreSQL, Hibernate

- Developed an online Civilization-like conquer game, built client using Android Studio & built server using IntelliJ.
- Guided by SOLID principle, built with Gradle, managed at Gitlab using CI/CD, tested with JUnit.
- Used Hibernate to store data in PostgreSQL.

Rider

January 2020 - February 2020

Team project: Python, Django, PostgreSQL, Bootstrap, Nginx

- Developed a RESTful Uber-like web app and shipped in Docker.
- Implemented user friendly interface using Bootstrap and added CSRF token for protection.
- Stored data in PostgreSQL with SQL injection protection, using Nginx as HTTP load balancer.

Shell

November 2019 - December 2019

Individual project: Linux, C++, C, GDB, Valgrind

- Implemented a Linux shell in RAII style which could interpret basic command.
- Parsed the input string, then forked and executed. Tested with GDB & Valgrind, no memory leak.
- Provided access to environment variable and redirection for io stream.

MIPS

October 2019 - November 2019

Individual project: Verilog

- Implemented a single cycle 32 bit MIPS CPU using Quartus.

RESEARCH

Lasers

November 2017 - December 2018

Research asassistant: MATLAB

- Designed an oscillator generating lasers and conducted numerical simulation with MATLAB.
- Helped build up the oscillator ideal for communication and the result was published on Optics Letter.

COURSES

Object-Oriented Programming, Data Structure and Algorithm, Operating System, Computer Network, Database, Robust Server