GUANHUA CHEN

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EDUCATION

DUKE University   *August 2019 - Present*
M.S. in Electrical & Computer Engineering
GPA: 3.57/4.0

Huazhong University of Science and Technology   *September 2015 - June 2019*
B.S. in Electrical & Computer Engineering
GPA: 3.75/4.0

PROJECTS

Stash   February 2020 - March 2020
Individual project: Java, JavaFX, JUnit, Gradle   *Durham, NC*

· Developed a 2D puzzle game using IntelliJ Idea, in which players could hide and find blocks.
· Guided by SOLID principle, built with Gradle, managed at Gitlab using CI/CD, tested with JUnit.
· Introduced elegant GUI & audio by using JavaFX.
· Supported network gaming and competing with BOT

Rider   January 2020 - February 2020
Pair project: Python, Django, PostgreSQL, Bootstrap, Nginx, JavaScript, CSS, HTML   Durham, NC

· 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   *Durham, NC*

· 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   *Durham, NC*

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

RESEARCH

Lasers   November 2017 - December 2018
Research asassistant: MATLAB   *Wuhan, China*

· 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