

# GUANHUA CHEN

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## EDUCATION

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### 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

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### 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.

## RESEARCH

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### 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

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