

Zhiyu Zhang (Jason)

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github.com/QGrain



EDUCATION

Huazhong University of Science and Technology

Sep 2017 - Jun 2021

Bachelor Electronic Information and Communication

- **GPA:** 3.75 / 4.0
- **Honours:** Freshman Cultural and Sports Scholarship (2017), Technology Innovation Scholarship (2018)

COMPETITION AWARDS

- Third Prize of American College Students Mathematical Modeling Competition *Feb 2019*
- First Prize of Mathematical Modeling Competition of HUST (2/128) *Dec 2018*
- Third Prize of Chinese College Students Mathematics Model Competition *May 2018*
- Second Prize of American College Students Mathematical Modeling Competition *Feb 2018*

RESEARCH EXPERIENCE

Cyber Security: A System of Intrusion Detection and Defence ★★★★★

Sep 2019 - Present

Technical Backbone, Supervised by Associate Professor Guohui Zhong

Dian team, HUST, Wuhan

- **Project introduction:** A national level project aiming at Intrusion Detection and Prevention, which covers the techniques of Reverse Engineering, IDS/IPS, Network Traffic Detection and Deep Learning.
- **My work:** Reverse virus of Wannacry and figure out its execution principles; Use Convolutional Neural Network to process the binary image of traffic of DDoS, NMAP and Eternal-Blue and detection them; Design a Fast Recoverable Experiment Platform for the project. (Paper is in preparing for **IEEE ICTC 2020**)

An Interactive Online Programming Platform for Learning Computer

Jan 2020 - Feb 2020

Networking Protocols ★★☆☆☆

Backbone, Supervised by Associate Professor Xiaojun Hei

HUST, Wuhan

- **Project introduction:** Develop an online NS-3 programming web platform with **ns-3** tutorial pages, which covers the techniques of vue, node.js, NS-3, Docker Cloud and Queue Mechanism.
- **My work:** Design the workflow of our platform; Deploy and evaluate ns-3 back-end; Construct experiments to find the suitable container number which owns the highest performance. (Paper has been submitted to **SIMUtools 2020**)

UCB Summer Research: Inverse Problem in Structures ★★★★★☆

Aug 2019 - Sep 2019

Group Member, Supervised by Professor Shaofan Li

UC Berkeley, CA

- **Project introduction:** Inverse problem in structure is to rebuild the situation of a damaged structure, which covers the techniques of Finite Element Analysis, Abaqus and Deep Neural Network.
- **My work:** Adopt FEA method to simulate the physical relationship of the Cantilever; Use tensorflow to build deep neural network and make prediction of the situation of Cantilever; Explore what kind of network structure would own the lowest prediction error rate. (Paper is in preparing for **Applied Science**)

Huawei NGINX Reverse Proxy File Sharing Service ★★☆☆☆

Jun 2018 - Dec 2018

Backbone, supervised by Associate Professor Guohui Zhong

Dian team, HUST, Wuhan

- **Project introduction:** Develop windows network driver and deploy NGINX reverse proxy server to provide authentication management for file sharing service for Huawei company, which covers the techniques of WDK, Linux Kernel, TCP/IP. Team received a grant of 26,000 RMB to continue the project.
- **My work:** Develop windows driver according Microsoft WDK API; Parse Samba 2 protocol to dump the transferred files; Explore the methods of Access Control; Improve performance by setting up LVS load balancing servers.

MISCELLANEOUS

- **Coding Skills:** C/C++, MATLAB, Python, Linux Shell, Assembly, Server Operation and Maintenance, Git, LaTeX
- **Languages:** English (TOEFL 93, IELTS 6.5-Expired, CET-6/CET-4)
- **Personal Website:** <https://QGrain.github.io>
- **Interests:** Guitar FingerStlye, Piano, Basketball, Swimming