

# Cui Chi

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## EDUCATION

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### National University of Singapore, Singapore

*Master of Computing, AI Specialization*

08/2022-01/2024

GPA: 4.42/5.0

### Zhejiang University, China

*Bachelor of Information Security*

09/2018-06/2022

GPA: 3.8/4.0

– Outstanding graduate

– Third-class Scholarship of Zhejiang University (2019-2020 & 2020-2021)

## RESEARCH EXPERIENCE

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### Automated Phishing Detection Using Deep Learning

*Research Assistant*

NUS-NCS Joint Laboratory for Cyber Security

02/2023-Present

– Responsible for the computer vision part of the project, designed new data augmentation methods to improve the performance for the image recognition

### Security Solution Based on Smart Contracts

*Research Assistant*

Singapore Blockchain Innovation Programme

10/2022-01/2023

- Applied deep learning to anomaly detection in smart contracts and designed a word embedding process to convert event logs into numerical vectors
- Managed data cleaning and preprocessing, decoded the logs of smart contracts, and categorized them
- Migrated an automatic vulnerability detection system for source code to the Solana project

### Injection attacks targeted at sensors

*Undergraduate thesis*

School of Cyber Space and Technology

10/2021-06/2022

- Executed EMI injection attacks on the amplifiers of wireless sensors, inducing a maximum deviation of 3 degrees in infrared thermometer readings, showcasing the vulnerability of such systems
- Assessed the impact of the attacks, tested the effects of different scenarios and obstructions on the effectiveness of the attack

## COURSE PROJECTS

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### Road Sign Recognition Based on OCR

*Final project of Neural Network and Deep Learning*

10/2022-12/2022

- Replicated the CTPN text detection algorithm, using CNN and LSTM, to effectively detect horizontally distributed text in complex environments
- Applied a CTC-based OCR decoding algorithm for text recognition, successfully converting images into text with a high accuracy.

### Attacked HarmonyOS under the ARM architecture

*Final project of Software Security*

04/2021-06/2021

- Wrote shellcode, and performed ROP and heap attacks on the system
- Exploited format string vulnerabilities and buffer overflows to inject attack code into programs, hijacked control flow, and gained kernel-level privileges

## INTERNSHIP

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### ByteDance

*iOS Client Software Development Internship*

04/2021-10/2021

- Completed the iOS client architecture design and development with high quality based on product requirements
- Assisted in the development of the company's online classroom CoreDemo, and independently complete several modules

## SKILLS

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**Languages:** Native Speaker of Chinese; Fluent in English (IELTS-7.0)

**Computing:** C/C++(Proficient), Python(Proficient), Objective-C(Proficient), Rust(Intermediate)