

TAN YUANHONG

Computer Science & Applied Mathematics Undergraduate

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EXPERIENCE

Undergraduate Research Assistant

N-CRIPT (NUS Centre for Research in Privacy Technologies)

May 2019 – Present Singapore

- Built a decentralized OAuth 2.0 service for mobile devices to liberate user's data from the cloud.
- Implemented a real-world tool for continuously monitoring the k-clustering of moving objects. Demonstrated possibilities for a privacy-prioritized location data collection&analysis system.

PROJECTS

(all available on my GitHub page)

Mobile Rebuild for LumiNUS (NUS Learning Management System)

- Developed a cross-platform mobile application for NUS's learning management system.
- Based on Flutter & Firebase, we optimized experience for both iOS and Android, both phones and tablets.

Decentralized Authorizaiton Service

- Inspired by OAuth 2.0 and TLS.
- Achieved all-round control over personal information by letting mobile devices to act as authorization servers hosting the information of the device's owner.
- Implemented a custom end-to-end encryption protocol suitable for mobile devices to eliminate trust concerns.

Amazons Chess Game

- Written in Java with built-in Swing GUI library.
- Supports local co-op and simple AI

ACTIVITIES

Undergraduate Teaching Assistant

National University of Singapore

Feb 2019 – Present Singapore

- CS1101S Programming Methodology
- CS1231 Discrete Structure

Core Team Member

NUS Hackers

Jan 2019 – Present Singapore

- NUS Hackers is a student-run organization committed to the spread of hacker culture&free/open-source software.
As a core team member, I have been responsible for
- Organizing Singapore's largest student-run Hackathon, Hack&Roll
- Organizing and publicizing weekly technical talks which are open&free to the general public

Coding Lesson Lecturer

Lab: Remote

Dec 2018 China, Chongqing

- Taught HTML&CSS to high school students in an underprivileged area of China. Materials can be found here.

EDUCATION

Bachelor's Degree

National University of Singapore

August 2018 - Present

- Double degrees - in Computer Science and Applied Mathematics
- CAP (Cumulative Average Point): 5.0

HONORS & AWARDS

2018 ICPC Asia Singapore Regional, Honorable mention

as one of the few year-one NUS teams that advanced to the 2018 Singapore regional.

Recommendation Letters For Outstanding Performance

CS2040 DS&Algo, CS2100 Computer Organization, CS2105 Intro to Computer Networks, CS2106 Intro to OS

Dean's List - AY19/20 Sem1

rank within the top 5% of their cohorts at the end of each semester.

Science & Technology (S&T) Undergraduate Scholarship (National University of Singapore)

SM2 Scholarship (Ministry of Education)

MORE PROJECTS

- MarkBind: a tool for generating content-heavy websites from source files in Markdown format
- LockerBot: A Telegram Bot for registering lockers in School of Computing.
- AlgoBase: A CLI-based algorithmic problem manager.

STRENGTHS

UX

Cross-platform Development

Product&Team Management

SKILLS

Java, Flutter&Dart
C, C++, Python, MySQL
HTML, CSS, Node.JS
MATLAB, TensorFlow

