

# Yong Zhi Yuan

✉ yongzhiyuan@u.nus.edu | 📧 Zhiyuan-Amos | 🌐 zhi-yuan-yong



## Education

### National University of Singapore (NUS)

Singapore

BACHELOR OF COMPUTING (HONOURS) IN COMPUTER SCIENCE

Aug. 2015 - Dec. 2018

FOCUS AREAS: SOFTWARE ENGINEERING, COMPUTER SECURITY

- CAP: 4.45 / 5
- Achieved A+ grade for the following modules: Data Structures & Algorithms, Design & Analysis of Algorithms, Software Engineering, Thematic Systems Project

## Programming Knowledge & Skills

**Competencies** Design Patterns, Git, iOS, Java, JUnit, Swift

**Familiar with** Android, Continuous Integration (Travis CI), Gathering User Requirements, Gradle, Memory Management

## Work Experience

### Housing & Development Board (HDB)

Singapore

SOFTWARE ENGINEER INTERN

May. 2018 - Aug. 2018

- Redesigned the key workflow (performed 60 - 80 times per day per inspector) of the existing mobile application used by inspectors to perform site inspection, thereby reducing the number of steps required to perform this workflow from 8 to 3.
- Redesigned 2 other workflows, thereby reducing the number of keystrokes required to perform them from 8 to 2 and 7 to 2.
- Enhanced existing features and suggested new features, thereby improving the productivity and quality of the inspectors' work.
- Redesigned the User Interface to be compatible with the improvements made above.
- Automated the monthly generation of inspection schedule, reducing the amount of time taken to generate the schedule from 1 day to 15 minutes.
- Gathered User Requirements from scratch and continually verified my prototype with users. This helped me to develop relevant solutions (as seen above) which will eventually be fully developed by HDB's IT Department and deployed for the inspectors to use.

### National University of Singapore - Open Source Software (NUS - OSS) (10k LoC, 1k commits)

Singapore

SOFTWARE ENGINEER INTERN

May. 2017 - Aug. 2017

- Worked on [Addressbook-Level4](#), a Java application used to teach NUS Computer Science (CS) students about Software Engineering. This is a compulsory module for all NUS CS students. As a result, this project demands high standards of code quality, and working on this project taught me how to write quality code, and I became familiar with Software Engineering patterns.
- Mentored a student under the Google Summer of Code program and guided new contributors by discussing with them on how to improve on the existing code architecture and reviewing their code.
- Wrote missing unit, integration and system tests, increasing test coverage from 90% to 92%.
- Designed and wrote code to implement new features such as allowing the user to undo and redo their actions.
- Continued contributing after the internship stint till today. Estimated contribution: [14.4k LoC changed](#), [90 PRs merged](#)

### NUS

Singapore

TUTOR - PROGRAMMING METHODOLOGY

Aug. 2016 - Nov. 2016

- Taught a class of 12 undergraduate students on fundamental concepts of problem solving using C language, on a weekly basis. Also assessed their understanding & provided feedback for improvement.
- Achieved Overall Teaching Effectiveness Score of 4.40 / 5

## Projects

### Train to Changi

Singapore

NUS

Mar. 2017 - May. 2017

- Developed an [interactive, algorithmic puzzle game](#) on iPad in a team of 4. Users who have no prior exposure to algorithmic thinking will gain some understanding of algorithmic thinking and how coding works.
- Designed and wrote code for the front-end components such as game logic and model, according to the Model-View-Controller architecture.
- Wrote multi-threading code.

## Wut 2 Do?

NUS

Singapore

May. 2016 - Aug. 2016

- Developed an [Android mobile application](#) with a partner, which help users to locate entertainment activities near them.
- Used Google API and self-learnt programming languages (PHP, SQL).

## Cocurricular Activity

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### Exercism

COMMITTER

Jan. 2018

- Exercism aims to help users improve their programming skills in many different languages through writing code and submitting it to Exercism for feedback.
- Suggested [improvements](#) for existing suite of test cases and subsequently updated them. Users attempting these exercises now have a cleaner suite of test cases to refer to.
- Implemented the [model answer and the tests](#) for an algorithmic exercise. Users can now attempt this new exercise.

### Microsoft Azurenaut Hackathon

Singapore

PARTICIPANT

Jan. 2017

- Created a chatbot in a team of 3 that provides information about NUS, such as the estimated arrival times for the next bus and the availability of car park lots. This project aims to integrate existing mobile applications such as NUS Carparks and NUS NextBus into a single application.

### Edusave Awards for Achievement, Good Leadership and Service (EAGLES)

Singapore

TEMASEK JUNIOR COLLEGE (TJC)

2012

- National Inter-school Wushu Championships 3rd and 4th position
- Performer in National Day Parade
- Class Chairperson: 2011 - 2012

## Other Information

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### Technical Talks

Gave technical talks on Garbage Collection & Safeguarding your code from Memory Leaks as part of coursework.

### Technical Writings

Improved clarity of existing material and added new sub-topics on [Java Reflections](#) & [Introduction to Swift](#) as part of coursework.

### Hobbies

Playing the guitar, doing photography, reading non-fiction books.