

# Yong Zhi Yuan

ASP.NET CORE 6 · BLAZOR · AZURE · CLEAN & SECURE CODE · TECH WRITER

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## Summary

I write tech articles at <https://zhiyuan-amos.github.io/blog>. Backend Developer with industry experience building web applications using ASP.NET Core and writing Clean, Maintainable & Secure Code. Also experienced in Blazor & Azure.

One of my recent highlights include publishing a technical guide titled [Async / Await: From Zero to Hero](#), receiving over 33k post views and over 430 reactions to date.

## Work Experience

### Illumina

Singapore

SOFTWARE ENGINEER 1

Feb. 2021 - Present

- Implemented new features, upgraded dependencies and fixed bugs for a brownfield project using AngularJS 1.3, ASP.NET 4.6.1, RabbitMQ, Quartz.NET, ServiceStack, NHibernate, PostgreSQL, PowerShell and WiX Toolset, with Continuous Integration using TeamCity and Artifactory.

### ST Engineering

Singapore

SOFTWARE ENGINEER

Dec. 2018 - July. 2020

- Designed the codebase for a greenfield project based on Vertical Slice Architecture and developed new product features, applying knowledge of ASP.NET Core 2.1, EF Core 2.1, Mediatr, SignalR and SQL.
- Identified and implemented Concurrency Control using both Pessimistic & Optimistic Locks, and Application Security measures such as authentication, authorisation and protection against CSRF and XSS attacks.
- Provided technical guidance for a team of 4 developers by performing code reviews and suggested improvements and best practices to follow, and guided 2 junior developers on using Design Patterns such as MVVM for a C# desktop application and Algorithmic Thinking.
- Simplified inherited legacy Java code substantially, resulting in a net decrease of 4.7kLoC, while fixing bugs and implementing multiple new features.
- Eliminated manual execution of performance tests for a Java desktop application by writing an automated test script in Python, saving 45 minutes per test execution.
- Eliminated the need for a team of 20 programmers to perform repetitive chores such as manual cleaning of multiple cache folders (~10 times a day) by initiating and writing a PowerShell script.

### Housing & Development Board (HDB)

Singapore

SOFTWARE ENGINEER INTERN

May. 2018 - Aug. 2018

- Gathered User Requirements from scratch and redesigned the key workflow (performed 60 - 80 times per day per inspector) of the existing mobile application, reducing the number of steps required from 8 to 3.
- Automated the monthly generation of inspection schedule, reducing time taken to generate the schedule from 1 day to 15 minutes.

### National University of Singapore - Open Source Software (NUS - OSS)

Singapore

SOFTWARE ENGINEER INTERN

May. 2017 - Aug. 2017

- Made improvements to a [Java desktop application](#) used by National University of Singapore to teach students on Software Engineering by providing a model example of a high quality codebase for students to follow.
- 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%.

### NUS

Singapore

TUTOR - PROGRAMMING METHODOLOGY

Aug. 2016 - Nov. 2016

- Led a group of 12 students in discussions to familiarize with fundamental concepts of problem solving by computing and programming using C language.
- Achieved an Overall Effectiveness Score of 4.40, which is 0.23 higher than the faculty average in School of Computing.

## Projects

### Couple

Singapore

SELF-INITIATED PROJECT

Nov. 2020 - Present

- Created a Progressive Web Application using Azure Static Web App, Azure Functions, Azure Cosmos DB, Blazor, .NET 6, EF Core 3.1, IndexedDB, Fluent Validation.

## Enhancing Data Entry & Data Query

Singapore

A SOCIAL SERVICE ORGANISATION

Jan. 2020 - Oct. 2020

- Created a Progressive Web Application from scratch, where I independently learnt and applied knowledge of Azure Static Web App, Azure Functions, Azure Cosmos DB, .NET 5, EF Core 3.1, Blazor Web Assembly w/ Telerik, OData and Fluent Validation.

## Integrated Solution for Contactless Check-In/Out

Singapore

OPEN INNOVATION PLATFORM

Jul. 2020 - Sep. 2020

- Led a team of 2 Software Engineers to gather User Requirements, design UI and explore technologies such as Progressive Web Application, Optical Character Recognition and Facial Recognition.

## Information Security Capstone Project

Singapore

NUS

Aug. 2018 - Nov. 2018

- Analyzed security requirements, designed and implemented a secure web application using Java, Spring, Hibernate & MySQL.

## Software Engineering on Modern Application Platforms

Singapore

NUS

Mar. 2017 - May. 2017

- Developed an iOS game using Swift and applying knowledge of MVC architecture.

## Independent Software Development Project

Singapore

NUS

May. 2016 - Aug. 2016

- Developed an Android mobile application using Java, PHP, SQL and Google Maps API.

# Education

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## 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