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
A Social Service Organisation

Singapore

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
Open Innovation Platform

Singapore

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
NUS

Singapore

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
NUS

Singapore

Mar. 2017 - May. 2017

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

Independent Software Development Project
NUS

Singapore

May. 2016 - Aug. 2016

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

Education

National University of Singapore (NUS)
Bachelor of Computing (Honours) in Computer Science

Focus Areas: Software Engineering, Computer Security

Singapore

Aug. 2015 - Dec. 2018

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

Cocurricular Activity

Exercism
Committer

Jan. 2018

- Suggested improvements for existing suite of test cases and subsequently updated them.
- Implemented the model answer and the tests for an algorithmic exercise.

Microsoft Azurenaut Hackathon
Participant

Singapore

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)
Temasek Junior College (TJC)

Singapore

2012

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

Other Information

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	Reading, Cycling, Among Us & Overcooked 2.