

Wei Wen GOH

Mobile: +65 9125 2435

Email: weiwen@u.nus.edu

Skype: goweiwen

GitHub: github.com/goweiwen

Website: goweiwen.me

LinkedIn: linkedin.com/in/goweiwen

Resume: goweiwen.me/cv



Personal Statement

My first foray into programming was making mods for games. *Little Fighter 2*, *CS2D* and *Garry's Mod* allowed users to write extensions using various programming languages, ranging from Turing incomplete domain-specific languages to commonly-used scripting runtimes such as Lua, and appealed to my imagination. I became interested in game development and soon went on to create my own games and game engines.

More recently, in Oct 2017, I led the front-end development for an iOS, and Android app called Pear (github.com/Pear-App/pear-client), which targets shy singles and help them get on dating platforms by allowing their friends to match-make them. Pear won the 2nd prize in National University of Singapore's (NUS) School of Computing Term Project Showcase, where students present their projects they have completed during the semester. I wrote the progressive web application with Vue, and wrapped it with Cordova into the iOS and Android applications. While developing Pear, I also published vue-swing (www.npmjs.com/package/vue-swing), a Vue component used in Pear.

Concurrently, I also worked on a freelance project and created a cryptocurrency mining analytics dashboard for our client to visualize the health of their miners and easily troubleshoot problems. I designed and built the front-end as a progressive web application using Vue. As it was a commissioned project requiring high-quality code, we followed Test-Driven Development and wrote extensive tests.

In my internship with Government Technology Agency of Singapore (GovTech) during Dec 2017, I wrote public API endpoints for the Data.gov.sg developer portal. From several differently structured carpark availability data sources, I designed a schema in AWS DynamoDB and wrote scrapers to fetch and combine them into a unified format for archiving. The scraper and endpoints were written in Node.js, deployed with AWS Lambda and published using AWS API Gateway.

While at GovTech, I also debugged a slow-running Node.js script. The running length of the script exceeded the five-minute time limit allowed by AWS Lambda, so it was run on the more expensive EC2 even though it was only occasionally run. I was tasked to benchmark and profile the script to find the slow parts and speed it up. Since the bottleneck in the script was a function verifying input correctness, which was too important to forgo, I documented the findings for future reference. This taught me how the V8 JavaScript engine manages memory and garbage collection.

As a student in the National University of Singapore, I am interested in modern programming languages, functional programming, and compiler design, and am currently working towards a specialization in Programming Languages. I have also taken several courses in Artificial Intelligence, as I feel it has a huge potential in this world of big data.

In my internship, I can use my experience in software engineering and product design and development to solve difficult problems and build meaningful products for businesses and customers. I hope to learn how startups use modern technology stacks to face difficult software engineering problems.

EDUCATION

National University of Singapore

Aug 2016 - Present

Bachelor of Computing in Computer Science. GPA: 4.70/5.00 (First Class Honours)
Tutor for CS2103 Software Engineering (Spring 2018)

Singapore Polytechnic

Apr 2011 - Apr 2014

Diploma in Chemical Engineering. GPA: 3.67/4.00
Diploma-Plus Certificate in Engineering Mathematics and Science

PROFESSIONAL EXPERIENCE

Government Technology Agency of Singapore (GovTech), Data Engineer Intern

Dec 2017 - Jan 2018

Implemented and released public APIs for Data.gov.sg portal using Node.js with AWS Lambda and DynamoDB.
Minimized AWS Lambda costs by benchmarking, profiling and optimizing slow-running Node.js scripts.
Developed and deployed SMS-based medicine reminder solution targeted at middle-aged users.

Ethereum Tech, Freelance Web Developer

Oct 2017 - Dec 2017

Created the front-end of a cryptocurrency mining analytics dashboard with Vue.js.
Suggested and implemented improvements to user experience from client's original design.

Ministry of Defence (Singapore), Personnel Systems Analyst

Dec 2014 - Aug 2016

Simulated and analysed personnel movement using complex system dynamics simulations.
Wrote VBA macros and SQL queries for Microsoft Access, Excel and Word.

Alpha Consulting Engineers Private Limited, System Administrator

Mar 2014 - Jul 2014

Administered Windows servers and clients using IIS and Active Directory.
Redesigned homepage using HTML5, CSS and JavaScript.
Implemented features in the intranet page using jQuery, PHP and MariaDB/MySQL.
Decompiled and modified legacy JavaServer Pages application.

PROJECTS



Pear

Oct 2017 - Nov 2017

Progressive Web App (PWA), iOS and Android app where users matchmake their friends.
Led front-end development using Vue.js and Cordova.
Released app to iOS App Store and Google Play Store, hit 300 users within 24 hours.
Source: github.com/Pear-App/pear-client, Info: [11th STePS submission](#)



collaborate!

Jun 2017 - Aug 2017

Real-time collaborative webapp that simulates a table top discussion.
Led front-end development using React + Redux and Socket.io.
Wrote and deployed back-end using Node.js and Koa.
Source: github.com/goweijen/collaborate, Demo: collaborate-app.herokuapp.com



vue-swing

Oct 2017 - Present

Vue.js component for swiping cards left and right, as seen in apps like Jelly and Tinder.
Published on NPM and actively maintained.
Source: github.com/goweijen/vue-swing



ivle-sync

Aug 2016 - Present

Automatically downloads files, announcements and webcasts from NUS's IVLE portal.
Created and maintained application built in Python 3.
Source: github.com/goweijen/ivle-sync

AWARDS AND ACHIEVEMENTS

Yale-NUS Data 2.0 Datathon, First Place

Mar 2018

Studied viability of ride sharing in Singapore compared to public transport regarding carbon emissions using R.

NUS 11th School of Computing Term Project Showcase (11th STePS), Second Place

Nov 2017

Pear won 2nd prize in NUS's 11th STePS for CS3216 Software Product Engineering for Digital Markets.

NUS Orbital Programme 2017 (Apollo 11), Honorable Mention

Sep 2017

collaborate! won an honorable mention in the advanced category of NUS School of Computing's Orbital 2017.

FOSSASIA 2017 Microsoft Mission Mars Challenge, Second Prize

Mar 2017

DMG Excellence Award (Individual)

Mar 2016

Awarded by the Defence Management Group to individuals who have displayed exemplary attitude towards work.

PREFERRED TECHNOLOGIES

Languages: Python, JavaScript, HTML/CSS, Haskell, Golang, Kotlin, Swift, Rust, Scala, Java, PHP, SQL

Technologies: Vue.js, React.js, Angular, jQuery, Elm, Node.js, Django, Laravel, Keras, TensorFlow

Degree: Bachelor of Computing (Honours) in Computer Science

Cumulative Average Point: 4.70 / 5.00

Year	Level	Course Description	Grades
Aug – Nov 2016	Year 1/Semester 1	Data Structures and Algorithms I	A
		Discrete Structures	A
		Quantitative Reasoning	A-
		Linear Algebra I	A-
		Calculus for Computing	S
Jan – May 2017	Year 1/Semester 2	Asking Questions	CS
		Logic	S
		Data Structures and Algorithms II	A
		Computer Organization	A
		Fundamentals of Physics II	A
		Probability	A-
Aug – Nov 2017	Year 2/Semester 1	Independent Software Development Project	CS
		Mathematical Statistics	B
		Machine Learning	A
		Effective Communication for Computing Professionals	B+
		Software Engineering	A
		Software Product Engineering for Digital Markets	A+
Jan – May 2018	Year 2/Semester 2	Drugs and Society	In-progress
		Communicating in the Information Age	In-progress
		Introduction to Artificial Intelligence	In Progress
		Introduction to Operating Systems	In Progress
		Design and Analysis of Algorithms	In Progress
		Logic and Formal Systems	In Progress

NUS Grading Scale:

A+ & A (5.0); A- (4.5); B+ (4.0); B (3.5); B- (3.0); C+ (2.5); C (2.0); D+ (1.5); D (1.0); F (0)

S = Satisfactory; U = Unsatisfactory

CS = Completed Satisfactorily; CU = Completed Unsatisfactorily

EXE = Exempted; IC = Incomplete; IP = In Progress; W = Withdrawn