

# Chong Yun Long

## Fullstack Software Engineer

### contact

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### languages [human]

- english → fluent
- mandarin chinese → fluent
- japanese → conversant

### programming

- Typescript, JavaScript, React, Redux, Next.js
- Java, Spring Boot
- C#, ASP.NET core
- AWS, terraform
- Python, Ruby on Rails

## experience

### Indeed

Senior Software Engineer, Careers

Apr 2019 → Now

- Full stack engineer working on *Careers Explorer* and *Certifications*. *Career Explorer* is the first large scale public facing node application at Indeed with over two million month views.
- Lead the frontend architecture design of *Careers Explorer*.
- Built and launch *Careers Explorer* together with a team of four engineers in three months. This includes various devops tasks (production/error monitoring, CDN integration, CI/CD pipelines).
- Coached both engineers within and outside of the team on various best practices ranging from API design, typescript and react development, backend best practices.
- Migrated *Indeed Certifications* from legacy Django templates to React
- Technology stack: Java 8 Spring Boot, Next.js with Typescript, Styled System

### nuTonomy/Aptiv

Senior Software Engineer, Data Platform

Sep 2018 → Apr 2019

Software Engineer, Data Platform

Jan 2017 → Sep 2018

- *nuTonomy* was acquired by Delphi (now Aptiv) in Oct 2017 for USD\$400 million.
- Full stack developer (.NET Core/React) for shared services/mapping team.
- Built large scale docker-based compute orchestration infrastructure which is able to dynamically scaled to support and coordinate hundreds of machines on AWS. The platform is used to support ML training pipelines, generate autonomous driving footage, running large scale safety simulations and computing important metrics.
- Set up one-command deployment procedures for all backend microservices by leverage on AWS cloud services (Serverless, Terraform). Uptime is higher and less error prone as compared to SSH-based deployments used previously.
- Setup and maintain Hadoop cluster processing large amounts of data generated from vehicle logs (4GB per vehicle per min)
- Introduced and coached the software team on Typescript/React. New CRUD services are written in Typescript/React and old services are incrementally rewritten using Typescript.
- Built and pioneered various microservices using modern .NET core on linux. Established coding standards for all backend microservices used in the company.
- Set up company-wide authentication/authorization using Auth0
- Implemented tiling based three.js mesh garbage collector which improved frame rates of annotated maps by 300%.
- Technology stack: ASP.NET Core MVC, Hadoop, Spark, Typescript, Python, React, RxJS, AWS

## Government Technology Agency of Singapore (GovTech)

Product Engineer, Government Digital Services (GDS)

Jan 2015 → Jan 2017

- Ruby on Rails/React.js developer for *Business Grant Portal (BGP)* involving various government agencies
- Re-engineered BGP's frontend/backend into a single-page application to provide a slicker user experience and interface
- Established a unified architecture for *BGP* to reduce application complexity, improve code reusability, reliability and performance
- Mentored and coached the team, new hires and vendors on the latest open source technologies.
- Employed agile software development methodologies and techniques (scrum, test-driven development, pair programming) to deliver quality products with high business value
- Technology stack: Ruby on Rails, Capybara, RSpec, JavaScript (ES6), ReactJS, Redux, Alt, Immutable.js, Jest, Webpack, Mocha, Karma

## DSO National Laboratories

Member of Technical Staff, Computer Security Lab

July 2014 → Jan 2015

- Analyzed protection mechanisms of Microsoft Windows kernel
- Researched novel reverse engineering techniques using emulators and virtualization technologies
- Conducted network security research on NAT networks
- If I told you more I would have to kill you ...

## education

### National University of Singapore

1st Class Honours in Bachelor of Computing, Computer Science

Aug 2010 → June 2014

- Dissertation (Applied Cryptography) – *Efficient Key Aggregation for Cloud Storage*
- Specialization in Information Security, focus area in Parallel Computing
- Awarded Dean's List for 3 semesters

## publications

Practical and Scalable Sharing of Encrypted Data in Cloud Storage with Key Aggregation

IH&MMSec 2016

React Rails for Business Grants Portal

Medium

## certifications

Kanban Management Professional - I

Jun 2016 → Now

Organizational Systems Web Application Pentester

Apr 2015 → Now

Certified ScrumMaster

Apr 2015 → Apr 2017