

# Goh Zi He

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## Experience

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### Fortinet

*Singapore*

Software Development Engineer

Jun 2021 - Present

- Maintain docker images to ensure it is vulnerability free 99% of the time for the production build system.
- Researched and created a test target (Flask web app) for the XSS microservice to test against.
- Created local build scripts (Makefile) to reduce total build/run time by 15%, saving four hours weekly.
- Added go unit test coverage to XSS microservice to reduce testing time by about 20%, without needing to run end-to-end testing.

### BT Singapore

*Singapore / Malaysia*

Security Consultant

Jun 2019 - Jun 2021

- Coordinated with multiple stakeholders to manage and migrate four major platforms with thousands of accounts onto new privilege access management software.
- Conducted a proof of concept fingerprint biometric application to showcase to customers in three days.
- Performed monthly system patches on multiple critical servers at data centers.
- Implemented Java runtime upgrades on multiple production systems to ensure applications running smoothly after upgrade.

### DBS Bank

*Singapore*

Technology Executive

Aug 2018 - May 2019

- Built and tested new features of Java backend as part of onboarding system for institutional customers.
- Developed JSP/JQuery to create features for online web forms.
- Worked with developers to debug and fix backend systems, tested features on the UAT environment.

### Acronis

*Singapore*

R&D Intern

Mar 2018 - Jul 2018

- Developed testing code in Python for Active Protection and implemented features in C++.
- Coordinated with different teams to ensure end products fulfill requirements.
- Researched extensively on malicious software behavior to implement protection features.

### NExT++ Research Center

*Singapore*

R&D Intern

Aug 2017 - Feb 2018

- Implemented RESTful API server using Python Flask for video annotation to set up an Nginx server for deploying a web application in the cloud.
- Cleansed data and built a machine learning project using SciKit-Learn.
- Fixed bug and launched feature in AngularJS.

## Education

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### Singapore Institute of Technology - DigiPen Institute of Technology

*Singapore*

B.S. in Computer Science in Real-time Interactive Simulation

Sep 2014 - Apr 2018

## Skills & Interests

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- **Programming Languages:** Python, C, C++, Java, C#, Go, Haxe, JavaScript, Bash, D, PowerShell, Ruby
- **Operating Systems:** Windows, Linux, FreeBSD
- **Tools:** Git, Docker, Insomnia.rest, Jupyter notebook, Elastic stack (ELK), Jenkins
- **Database:** MySQL, MongoDB, SQLite
- **Areas of interest:** Game making, Web scraping, Cryptocurrency, Finance

## Projects (More on [my blog](#))

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### Uniswap Transactions Backend

*Go, Swagger*

[Goh Zi He / uniswap\\_transaction\\_service · GitLab](#)

- Created a web backend system with REST api to support polling and batch processing of transactions fee of cryptocurrency coin pair.
- Web server was written in Go and uses goroutine in the background to perform live polling of transactions using Etherscan api and prices are computed using Binance api.
- Also supports batch processing of historical prices based on time range.

### Chess

*Java*

[Goh Zi He / Java Chess · GitLab](#)

- Wrote a 2 player chess game in Java, which was used as an assignment material to teach my student.
- The game is mostly feature complete and supports things like castling, rook promotion, etc.
- The game is interesting in a sense that it is fully playable on a command line interface, with the chess pieces using unicode to display.
- Might consider adding basic AI to future iterations.

### Singapore housing data dashboard ([Hosted on Heroku](#))

*Python, Dash*

[Goh Zi He / hdb\\_resale\\_visualization · GitLab](#)

- I am curious about how to deploy python apps to the web as well as about data visualizations.
- This project allowed me to learn about deploying to (heroku) web and also learning about the Dash library for Python to do interactive dashboards.
- Datasets are downloaded from data.gov.sg.

### Chip-8 emulator

*Dlang, OpenGL*

[Goh Zi He / D Chip8 · GitLab](#)

- Learned about D some time back and decided to try to build an easy application like an emulator using it.
- Great learning experience for building emulators and is a good exercise for programmers to know more about emulators.
- Overall I would say, D is very similar to C++ and it is relatively easy to pick up.

### Encrypted mail fetcher

*C++*

[Goh Zi He / MailFetcher · GitLab](#)

- Wrote a command line application to fetch GMail using Google's C++ SDK and save the encrypted contents of the mail on the machine.
- The application makes use of Google's SDK to fetch the emails and uses openssl library to encrypt the contents using both asymmetric and symmetric encryption algorithms.

## Other things I do

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### Private Tutoring

Oct 2020 - Present

- Conduct online and in-class lessons with 7 students from different levels.
- Provide introductory training on Python, Java, C++ and C#.

### Volunteering

Jan 2016 - Present

- Elected as President of Rotaract Club in SiT, ran volunteering events and annual recruitment drive.
- Involved as an active member in various activities organized by Rotary Club of Bugis Junction.
- Participated in two ACID (Annual Camp for the Intellectually Disabled) camps hosted by MINDS (Movement for the Intellectually Disabled of Singapore) youth group.