

Chua Si Wei

Computer Science Undergraduate

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Summary

A highly motivated and driven individual, with a passion in cloud infrastructures, full-stack development and data analytics. With strong interest in these areas, I constantly seek out learning opportunities to enhance my skills and keep up with latest industry trends. Besides pursuing a degree in Computer Science, I am committed to personal growth and have built several personal projects to further develop my expertise. These projects have allowed me to apply my knowledge and gain practical experience. My dedication, strong work ethic and determination to succeed will make me a valuable asset to any team.

EDUCATION

Singapore Management University

Double Degree, Bachelor of Science (Computer Science) & Bachelor of Accountancy

2022 - Present

- Cumulative GPA: 3.48/4.0
- SMU Aspirations Scholarship
- Programming Fundamentals I - C Programming (A)
- Programming Fundamentals II - Java (A+)

National Junior College

GCE A-Level

01/2018 - 11/2019

- Activities and societies: Co-Curricular Activities (CCA): Guitar Ensemble
- Subjects: H2 Physics, H2 Chemistry, H2 Mathematics, H2 Economics, H1 General Paper, H1 Project Work (GCE A-Level)
- Attained 83.75/90 RP

Nan Hua High School

GCE O-Level

01/2014 - 11/2017

- Activities and societies: Co-Curricular Activities (CCA): St John Brigade
- Subjects: English, Higher Chinese, Chinese, Pure Chemistry, Pure Physics, Pure Biology, Elementary Mathematics, Additional Mathematics, Combined Humanities (Social Studies & History)
- Attained L1R5 of 7

Work Experience

Singapore Police Force (NS)

In-Situ Reaction Team (IRT) Trooper

10/2020 - 02/2022

- Trained and proficient in advanced weapon handling techniques and drills.
- Conducted high visibility foot patrols in areas of significant importance to deter terrorist threats.
- Achieved "Tier 1" in Operation Excellence within the Home Team agencies.

Projects

NinjaVan Delivery Rider Mobile App

NinjaVan Code Dojo
2023

As part of a hackathon, our team has developed a mobile application specifically designed to support the mental health of delivery drivers. The app incorporates a user-friendly interface, enabling drivers to monitor and manage their well-being through a comprehensive questionnaire. Additionally, it provides a community forum for drivers to connect with each other, share feedback, and foster a sense of community. To further encourage engagement, the app includes a reward system where drivers can accumulate points and exchange them for vouchers. Built in 24 hours, using Flutter, our team made it into the Top 10 teams.

Route Planner

Personal Project

<https://sroutes-client.fly.dev/>

Inspired by the Strava's route planner feature, I set out myself to create a free and minimalistic version. Through an interactive map interface, one can add multiple destinations and map out efficient routes. This is supported by a shortest path computation algorithm in the backend, an undo/redo functionality, distance tracking and more. Create, manage, share and import your routes with friends using encoded shortlinks, all in a blazingly fast responsive web design.

Projects

FileGPT

Personal Project

<https://sgpt-client.fly.dev/>

Leveraging on the success of ChatGPT's successful year in 2022, I built a rendition that allows one to chat with AI with the knowledge of uploaded files. Supported file types include PDF and audio files. Each file uploaded has its content transcribed and converted into embeddings, stored in a vector database, Pinecone. Using OpenAI's API and LangChain, accurate answers can be provided to contextual queries. Answers are streamed using fetch event source API, to allow for a faster response time and seamless user experience.

SQL Visualiser

Personal Project

<https://svis-sweic.vercel.app/>

At the start of 2023, I took an SQL class and thought that DDL statements are confusing and hard to read. I set out to create a diagram visualiser. The web app features a built in code editor with SQL syntax highlighting. The DDL input is parsed and mapped to a JSON object, and converted into nodes and edges, consumed by the React Flow API. While advanced SQL statements are not supported, it allows one to easily visualise and organise complex entity relationships.

Extra-Curricular Activities

Volunteer Tutor

SG Cares Volunteer Centre

11/2022 - Present

- Weekly tutoring sessions with Primary 4 - Secondary 2 students

Guitar Ensemble

National Junior College

01/2018 - 04/2019

- Represented the school and performed in the 2019 Singapore Youth Festival (SYF)

Head of First Aid - St John Brigade

Nan Hua High School

01/2014 - 04/2017

- Learned important lifesaving skills and first aid knowledge.
- Performed public duty during school and community events.
- Appointed Head of First Aid Department in 2016, responsible for teaching practical and theory knowledge to brigade members.
- Conducted and lead Project Serve, an initiative to teach members of the public first aid skills over a 2-month period.
- Attended and conducted multiple leadership camps and courses between and within schools.
- Represented the brigade and marched in the 2015 National Day Parade (NDP).

Tech Expertise

NodeJS · ReactJS · ExpressJS · SolidJS · NextJS · Prisma · PostgreSQL · MongoDB · GraphQL · Redis · Git · JavaScript · TypeScript · Java · C · Python · Rust