

Bing Yu Yap

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EDUCATION

Bachelors of Science, Computer Science, Singapore Management University

Aug 2020 — May 2024

- GPA 3.94/4.0 — SMU CS Dean's List AY 2020/21
- Relevant Coursework: Collaborative Software Development, Database Systems, IT Solution Architecture

WORK EXPERIENCE

DeGods NFT

Backend Engineer

Aug 2022 — Present

LA, California

- Devised an in-house payment system using **Express.js** to automate sending transactions involving SOL and Solana Program Library (SPL) tokens like USDC and DUST, used for splitting royalties and sending weekly payslips.
- Further improved the payment system to ensure **guaranteed transaction** to overcome network failures using retry and exponential back-off system.
- Built a microservice to manage user's wallets for portfolio tracking and gating member-exclusive utilities.

ByteDance/TikTok

Backend Engineering Intern

Dec 2021 — Aug 2022

Singapore, Singapore

- Optimized performance of batch adding and exporting keywords feature by **85%** and **95%** respectively using **concurrency in Go** on the sensitive word management platform, saving users on an average of **10 minutes** each execution.
- Rewrote and streamlined sensitive text approval system to prevent policy conflict between different applications like TikTok and Lark, and between different regions and to enable higher efficiency in the process.
- Designed a set of microservices to support commonly used functionalities: text normalization and text detection, which handles **5,000 queries per second** and is used across the department to reduce development cost and improve scalability.

Solana.FM

Backend Engineering Intern

Jul 2021 — Nov 2021

Singapore, Singapore

- Designed a hosted service in **.NET** to publish unindexed Solana blocks to **RabbitMQ** which is then consumed by the block indexer written in **Rust**. Further optimized the hosted service's efficiency by **3,000 blocks/min**.
- Optimized block indexer to improve the indexer efficiency by upgrading from Diesel to pure **Rust** and **Tokio-postgres**.

PROJECTS

Backend Engineer, Bank Transaction-Rewards System (github.com/bingyuyap/cs301-project)

Aug 2021 — Nov 2021

- Created a highly performant service that processes bank transactions and rewards credits to users with minimal delay using **AWS Batch**, **SQS** and **Fargate**.
- Implemented a backend server in **.NET** that processes **1080 transactions/min** using **Asynchronous**, **Parallel Programming** and **Database Denormalization**.

Backend Engineer, Dash (github.com/CS203-G1/roster-service)

Aug 2021 — Nov 2021

- Dash is a service made for SMEs that features a dashboard that shows company metrics, COVID-19 metrics and automatic roster scheduler using **Spring Boot** framework.
- Utilized **Google's CP-SAT Solver** to automatically schedule employees' roster timings to ensure COVID-19 restrictions are followed, which is a NP-hard problem
- Selected as one of the top teams in class out of 35 teams to be presented to Credit Suisse.

SKILLS

Programming Languages
Frameworks
Technologies

Java, C/C++, C#, Golang, Rust, Python, Javascript/Typescript, SQL
Spring Boot, .NET, KiteX, Express.js, Ruby on Rails
Git, GraphQL, RabbitMQ, AWS, Heroku, Docker, MongoDB, MySQL, PostgreSQL, Jira