



# Alexander Oh

[alexander.oh@u.nus.edu](mailto:alexander.oh@u.nus.edu) | +65 9449 4933 | [www.linkedin.com/in/alexander-oh-zj](https://www.linkedin.com/in/alexander-oh-zj) | <https://github.com/alexandtheoh>

## About Me

Software engineer passionate about building scalable, real-time systems for startups, government, and big tech. I thrive in fast-paced environments and enjoy using my creativity to innovate unique solutions. Excited to bring my expertise in payment systems, real-time data processing, and LLM fine-tuning to contribute to startups in New York.

## Education

**National University of Singapore**, Singapore, SG  
*Bachelor of Science in Computer Science*

Aug 2023 – Present

- **Activities:** Represented Hall for Tennis, Track and Frisbee

## Professional Experience

**TikTok**, Singapore, SG

June 2025 – Present

*Backend Software Engineer for User Growth (Paid Ads)*

- Resolved inefficiencies in financial flows by creating an approval process for payments which incorporated >30 branches of conditional logic.
- The approval process implemented a custom mapping algorithm to display approval progress in the UI.
- Overcame system bottlenecks by implementing a batch upload file system which applied a deduplication and error checking validation algorithm.
- The system handled >1000 entries at a time and employed an asynchronous cronjob to maintain seamless user experience.
- The simplified batch upload system reduced manual data input and saved ~4.5 man days a month.

**Asian Institute of Digital Finance (Research Unit for Fintech)**, Singapore, SG

Jan 2025 – May 2025

*Undergraduate Research Intern*

- Completed a database migration to Bloomberg financial data for AIDF.
- Used Open AI api, fuzzy matching, pandas to match database variables.
- Wrote python scripts utilizing pandas to iteratively generate >3000 lines of SQL code for the new database.
- Updated and improved existing python backend to utilize new databases by rewriting old SQL queries and adding more features like error handling and multilingual input support.
- Wrote unit tests using python unittest for the new API calls implemented.

**Oneberry Technologies (Security Enterprise)**, Singapore, SG

May 2024 – Aug 2024

*Fullstack Developer*

- Developed and deployed a fully functional live monitoring website with authentication, enabling Singapore's Mass Rapid Transit System to concurrently track over 10,000 live sensors in real time.
- Led the backend development in a team of three, utilizing Node.js, Socket.io, RabbitMQ, MQTT, Digital Ocean for live testing, Strapi for database management and authentication and PM2 for concurrency.
- Collaborated on the frontend development using Next.js with TypeScript, CSS, and Bootstrap, incorporating Chart.js for data visualization.

**Maritime Port Authority (Government Organization)**, Singapore, SG

May 2023 – Aug 2023

*Backend Software Engineer*

- Collaborated closely with a frontend engineer to develop and add 8 new features to oneMPA app.
- Created new databases to handle file/image uploads and data storage.
- Utilized Nodemon, Node.js, SQL Server and Express.js to build RESTful apis.

## Projects

**Whatsapp LLM (Personal Project)**

May 2025 – Present

[https://github.com/alexandtheoh/whatsapp\\_llm](https://github.com/alexandtheoh/whatsapp_llm)

- This project fine-tunes a large language model (Mistral 7b) to emulate a person using their whatsapp chat logs using the Unsloth library and QLoRA.
- The model was fine tuned using over 250,000 whatsapp messages with a custom training template in order for the model to emulate the sender's style and knowledge.

## Skills and Interests

- **Languages:** English, Chinese
- **Technical Languages:** Go, Javascript, Python, Java, C, VBA, Typescript, SQL
- **Frameworks:** Node.js, React.js, Pandas, Hertz, Socket.io, Strapi
- **Tools:** Git, Docker, MQTT, RabbitMQ, Postman, Thrift, PM2, Cronjob
- **Interests:** Tennis, Basketball, Golf, Hiking, Pokemon Showdown