

Owen Lee Jun Hao

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EDUCATION

Nanyang Technological University, Singapore

Aug 2021 – Jan 2025

Bachelor of Computing – BE, Computer Science

EXPERIENCE

Software Engineer

March 2025 – Present

TikTok (iOS Messaging)

- Spearheaded the iOS development of a large-scale Sticker Panel redesign, collaborating with Android counterparts to define unified component standards and driving a **10.3% increase** in sticker sending metrics.
- Improved chat room architecture by refactoring core messaging components, migrating business logic from views to dedicated view models and converting message cells to generic UIViews, enabling flexible reusability across views while enhancing separation of concerns and resolving legacy technical debt.
- Improved the comment sharing experience with rich media integration, achieving an **8.4% increase** in sharing and commenting card tap penetration.
- Enhanced the group chat experience by implementing avatar read receipts, and ensured an inclusive interface by resolving a critical VoiceOver accessibility flaw in reaction views.
- **Technologies: iOS, Xcode, UIKit**

Software Engineer Intern

May 2024 – Sep 2024

GovTech Singapore (Government Digital Services)

- Lead front-end engineer for [Walking Trails @ CDC](#), a high-impact greenfield project utilizing reusable components, incorporating server-side rendering and optimized routing to efficiently serve **34,000+ active users**, leading to **30%** increase in user engagement.
- Implemented **object-oriented design principles in back-end development**, facilitating seamless integration with front-end systems.
- Enhanced code quality and reduce bugs and technical debt by **40%** through early detection and resolution in the development lifecycle using comprehensive Jest unit testing.
- **Technologies: TypeScript, Next.js, Tailwind CSS, koa.js, PostgreSQL, TypeORM, Docker, Zod, Swagger**

Software Engineer Intern

May 2023 – Dec 2023

GovTech Singapore (Government Digital Services)

- Developed front-end sharing features for [CrowdTaskSG's](#) Ollie Hunt campaign; implementation resulted in **45% increase in user sign-ups**.
- Led **front-end development** for the nationwide BudgetMealGoWhere campaign ([Great Budget Meal Hunt](#)), resulting in a **60% increase** in crowdsourced data collection.
- **Developed back-end APIs** to support the campaign, ensuring robust data management and seamless integration.
- **Optimized performance** and refinements for Smart Nation Builder's survey system, leading to **30% higher** interactions and survey throughput.
- **Technologies: TypeScript, Next.js, Tailwind CSS, koa.js, PostgreSQL, TypeORM, Docker, Jest**

PROJECTS

Samantha, E-Personnel Assistant

Oct 2023

GovTech GDS Hackathon 2023 (1st Runner-up)

- Developed and implemented an automated schedule management system utilizing **OpenAI GPT-4** API, resulting in **increased efficiency and accuracy** in scheduling process.
- Led **front-end development** and integrated with custom **RESTful APIs and OpenAI**.
- **Technologies: OpenAI, Next.js, koa.js, PostgreSQL, TypeORM**

shtnr | shtnr.owenlee.net

Aug 2023

- Developed a **full-stack URL shortening service** with user authentication using JWT and custom link management.
- Implemented click tracking and analytics to provide users with link performance insights.
- **Technologies: Next.js, koa.js, PostgreSQL, TypeORM**

modernPong | pong.owenlee.net

May 2021

- Reimagined Atari's PONG using modern technologies, resulting in a contemporary gaming experience.
- Developed game engine and renderer with JavaScript and HTML5 Canvas for improved performance.
- **Technologies: Firebase, WebSocket, AWS Route 53, Git**

TECHNICAL SKILLS

Programming Languages: JavaScript, TypeScript, Java, Python, SQL, Lua, PHP, C, C++, C#, Objective-C, Swift

Frameworks: Node.js, React.js, Next.js, Express.js, koa.js, Svelte Kit, Tailwind CSS, UIKit (iOS)

Others: Cryptographic Techniques, Data Structures & Algorithms, Database Design, PostgreSQL, MySQL, TypeORM, NoSQL, RESTful APIs, Git, Bash, Docker, Amazon Web Services, Firebase, LLM integration

Hall One Nanyang Technological University

Aug 2022 – Sept 2023

Co-President of Orientation Main Committee

- Exhibited **strong leadership** through mentorship, supervision of committee members, and collaboration with staff and administration to plan successful orientation activities.
- Planned and executed orientation events for over 200 incoming residents to ensure a smooth transition into dormitory life.