

# See Toh Jin Wei

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## WORK EXPERIENCE

- Full-stack Infrastructure Developer Intern** at *Undisclosed Hedge Fund* May 2024 – Present
- Enhanced the reliability, throughput and user experience of a distributed job runner crucial to the company's research and trading teams.
    - Designed and built a new highly parallel persistent MPMC queue tailored to the storage engine's use case.
    - Implemented advanced instrumentation to identify performance bottlenecks, optimising SQL queries and reduced page load times from over 20 seconds to less than 1 second.
    - Developed features including automated job rescheduling, improved dashboard pagination, UI, and more.
  - Upgraded a hackathon service's frontend and code evaluation system, which is used by over 500 participants.
  - Created a migration tool for transitioning from Evernote and Google Docs to a self-hosted Outline server, reducing costs and unifying the company's knowledge base.
- Backend Engineer Intern (Cloud Infrastructure)** at *TikTok* Jan 2024 – May 2024
- Worked on an API gateway that unifies and abstracts different cloud provider interfaces.
    - Added 30+ endpoints and a cronjob for periodically updating a Redis cache.
    - Automated web scraping process enhanced with code generation; eliminating human error, and reducing time taken from days to minutes.
    - Developed a JSON type conversion utility package to support easier translation between various types.
  - Built a set of 5 tools to automate workflows for detecting and upgrading outdated cloud instances.
- Full-stack Engineer Intern (Risk)** at *Cinch* Feb 2023 – Aug 2023
- Developed and maintained 4 backend microservices (orders, assets, data, logging).
  - Integrated internal backend services with Samsung Knox Guard and other 3rd party services (Stripe, DataCultr, Slack) for automated risk management workflows.
  - Built and upgraded multiple frontend dashboards for internal super-admin use.
  - Utilised various AWS services (Lambda, ECS, API Gateway, EventBridge) and set-up CI / CD deployments.
- Undergraduate Tutor** at *National University of Singapore* Various Semesters
- CS2103T Software Engineering (Fall 2023): Tutored 10 students, conducted weekly tutorials.
  - CS2040S Data Structures and Algorithms (Spring 2023): Tutored 15 students, conducted weekly tutorials, graded weekly problem sets, assisted in preparation of teaching materials.

## EDUCATION

- National University of Singapore** Aug 2021 – Dec 2024
- Bachelor of Computing in Computer Science*
- Focus Areas in Database Systems, Parallel Computing, and Computer Networking
  - Grade Point Average: 4.75 / 5.00

## PROJECTS

- Academic Projects**
- CS4224 — Designed schemas and set-up CitusDB and Cassandra clusters to support a highly concurrent transaction workload. The project was one of two selected as an outstanding example that was shared to the class.
  - CS4221 — Researched and built a SQL check constraints compiler to evaluate performance differences between check constraints and triggers.
  - CS3103 — Developed a highly parallel web crawler to identify trends in eSports news articles.
  - CS2103T — Built a contact and task management desktop application with Java.
- WATcher** | Angular, TypeScript, GraphQL May 2023 – Aug 2023
- Made major contributions to an open-source project for educators to easily monitor software projects.
  - Sped up the data fetching service, reducing first contentful paint from minutes to seconds.
  - Made improvements to the user interface to improve visual clarity and user experience.
  - Repository: <https://github.com/catcher-org/WATcher>
- OrgaNiUS** | Gin, Gorilla WebSocket, Go, React, TypeScript, MongoDB, Docker May 2022 – Aug 2022
- Developed a full-stack application for group work forming and management.
  - Live Application: <https://organius.jinwei.dev>; Repository: <https://github.com/OrgaNiUS/OrgaNiUS/>

### Personal Site | Astro, TypeScript

- My own personal site :)
- Live Application: <https://jinwei.dev>

### RepoStats | Svelte, TypeScript, Go, PostgreSQL

- Developed a full-stack web application that tracks repository statistics.
- Live Application: <https://repostats.jinwei.dev>; Repository: <https://github.com/seetohjinwei/repostats/>

### Don't Paiseh | FastAPI, Python, MongoDB, Next.js, TypeScript

- Built the backend for a 24-hour hackathon project: an application that quizzes users on a wide range of socially unique and intriguing questions.
- Repository: <https://github.com/moroha29/HackAndRollBE/>

### My Links | Go

- LinkTree & bit.ly as a single service, hosting my own links.
- Live Application: <https://link.jinwei.dev>; Repository: <https://github.com/seetohjinwei/links/>

### Task Manager | React, TypeScript, Ruby on Rails, PostgreSQL

- A task management web application with a login system, 3 themes, a variety of options and configurable defaults.
- Live Application: <https://tm.jinwei.dev>; Repository: <https://github.com/seetohjinwei/task-manager/>

### peCar-Parker | React, TypeScript

- A hackathon project for quickly finding parking spots in the user's area.
- Repository: <https://github.com/ParknRoll/peCar-Parker/>

### 50 Deaths | LÖVE Framework, Lua

- Short rogue-like 2D game with multiple levels and a final boss.
- Repository: <https://github.com/seetohjinwei/50deaths/>

### MonO | Gamemaker Studio 2

- Developed a *very difficult* 2D platformer where the player can shift between 2 forms, allowing for different interactions with different blocks as part of a game development hackathon.
- <https://teamfizzy.itch.io/mono>

## TECHNICAL SKILLS

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**Languages:** Go, Python, TypeScript / JavaScript, SQL (MySQL, PostgreSQL, CitusDB), NoSQL (MongoDB, Redis, Cassandra), C++ , Linux Shells (Bash)

**Frameworks:** Hertz, Django, FastAPI, Gin, React, Next.js, Angular

**Tools:** Amazon AWS, Git / GitHub, Docker, CI/CD tools (GitHub Actions), general Linux proficiency

**Human Languages:** English (native), Mandarin (native bilingual), Korean (A2 Waystage)

See the [CEFR wikipedia page](#) for foreign language fluency levels.