

# See Toh Jin Wei

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## WORK EXPERIENCE

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- 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  - Built a set of 5 tools to automate workflows for detecting and upgrading outdated cloud instances.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

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- 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

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### 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.

- 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>

My other projects can be found at <https://jinwei.dev/projects/>.

## 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