

# JABEZ THO

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**Languages:** English (Fluent), Chinese (Fluent)

## EDUCATION

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### National University of Singapore

*Bachelor of Computing in Computer Science*

*2023 – Present*

- Teaching Assistant: CS2103S Software Engineering, SWS3025 AI of Things (AIoT)
- Singapore Digital (SG Digital) Scholar (IMDA, 2023)

### Singapore Polytechnic

*Diploma in Computer Engineering; GPA: 3.97/4.00*

*2018 – 2021*

- Valedictorian, School of EEE Graduating Class of 2021

## WORK EXPERIENCE

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### Hera Solutions, Oslo, Norway

*Full-stack Developer Intern*

*Aug 2025 – Dec 2025*

- Architected and deployed a centralized internal dashboard unifying data analysis and client management, replacing 8 fragmented workflows and cutting turnaround time from 1 day to minutes.
- Redesigned authentication to enable automated client onboarding, cutting onboarding time from days to ~5 minutes.
- Improved responsiveness with optimistic UI patterns and tuned client-side request handling with SWR caching/deduplication; reduced latency from ~2s to ~300ms and cut API calls by 75%.
- Enforced cross-stack data integrity with Zod schema validation for DTOs, increasing developer efficiency by ~50% and reducing bug count by ~30%.

### Chickin, Indonesia

*Backend Developer Intern*

*May 2024 – Aug 2024*

- Migrated REST services to Kafka-based event-driven architecture, improving scalability and reducing sync issues by 80%.
- Improved unit and integration test coverage by 30% for critical backend services.

### Kuhaku LLP

*Co-founder*

*Dec 2020 – May 2023*

- Led backend and embedded integration for products deployed at Meta Singapore and Air Group.
- Managed agile development workflows as Scrum Master.

### GovTech, Sensors and IoT

*Embedded Software Intern*

*Mar 2020 – Jul 2021*

- Developed Bluetooth Mesh firmware for in-house RTOS to communicate with mesh sensors and actuators
- Engineered robust over-the-air (OTA) solution for embedded systems over LP-WAN, enabling up to 90% cost saving
- Worked on middleware of gateway system to control, monitor clusters of smart lamppost from the cloud. Deployed and tested system at Gardens by the Bay.
- Prototyped an automated embedded test rig to integrate existing CI/CD workflow, cutting manual testing time by 2 days and caught 30% more bugs.

## AWARDS & ACHIEVEMENTS

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### NSF of the Year (2023):

Awarded for outstanding performance and digitalization efforts during national service

### Humanitarian Assistance & Disaster Relief (HADR) Challenge, 1st Runner up:

Trained generative adversarial network (GAN) to augment typhoon satellite imagery aiding humanitarian and relief efforts

## Hack.Asia (Security Go) by Daimler, 1st Runner up:

Applied AWS Sumerian, ARCore and JS for an AR edutainment app on the topic of cyber-security

## PROJECTS

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### Sqlancer-lancer | [Github](#)

- Benchmarking tool built in Go to evaluate Sqlancer, a automated fuzz-testing tool to uncover DBMSs (e.g., SQLite, DuckDB, H2) bugs
- Automated test execution across different Sqlancer versions, producing self-contained HTML reports to identify bugs and regressions
- Coverage prober to collect coverage data from the DBMS upon Sqlancer execution via Gcovr and Jacoco

### AltVisit | [App](#)

- Interactive SvelteKit app that simulates navigating a webpage as a Person With Visual Impairment (PWVI)
- Developed screen reader simulator that parses DOM in keyboard navigable format and reads out the content using Web Speech API

### Snaplock - Kuhaku

- A one-stop IoT development platform offers integration and cloud services to a myriad of commercial locks
- Provide solutions to route network traffic from 3rd party locks to secure local servers for security and privacy compliance
- Work on the integration solutions aforementioned via network and firmware analysis, and built them using Go

More at [jabeztho.com/projects](https://jabeztho.com/projects)

## SKILLS

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**Programming:** Python, C++, Javascript, Go, Bash

**Frameworks:** Flask, Express, React, React Native, Next.js, TailwindCSS

**Tools & Platforms:** Git, Linux, Docker, Node.js, AWS

**Databases & Messaging:** Redis, PostgreSQL, Kafka, MongoDB

**Specialties:** Embedded Systems, IoT, Bluetooth Mesh