

ROWEN TEY KAI SEONG

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Malaysian - Tuition Grant Holder - Require EP Sponsorship

EDUCATION

Nanyang Technological University, Singapore

Bachelor of Computing (Hons.) in Computer Science [CGPA: **4.70/5.00**]

Aug 2021 – Dec 2024

- First Class Honours (Highest Distinction)
- Dean's List AY23/24
- Relevant courses: OOP, Software Engineering, Distributed Systems, Cloud Computing, Big Data Management

WORK EXPERIENCE

IDEORIA, Singapore | Software Engineer

Mar 2025 – Present

- Collaborated with a cross-functional team to build microservices for real-time border control service with **Angular**, **Spring Boot**, **SQL Server**, **Kafka** and **Docker**
- Applied transactional outbox pattern with idempotent consumers to address dual-write challenges, ensuring data consistency and reliability across the pipeline
- Implemented distributed tracing with context propagation across service boundaries via **Jaeger** to enhance system observability and reduce troubleshooting effort
- Revamped test data generation library by implementing a Pub/Sub pattern with multiprocessing, reducing generation time for 10 million records from over 2 hours to **20 minutes**
- Introduced **Mermaid** for diagram-as-code documentation of key feature flowcharts and **Bruno** for API testing-as-code, enabling streamlined API testing with automated runners and assertions for critical user stories

IDEORIA, Singapore | Software Intern

May 2024 – Aug 2024

- Involved in full stack feature development building event-driven microservices in **Angular**, **Spring Boot**, **Kafka**, **RabbitMQ**, **SQL Server** and **Docker** which serves **10k+ travellers** daily
- Consolidated init scripts for service dependencies into a single **Docker Compose** stack, minimising microservice startup time to approximately **1 minute**
- Developed a secure proxy service for **Elasticsearch** and **MinIO**, enforcing authentication and fine-grained authorization through LDAP integration to protect sensitive data

JobWiz, Singapore | Backend Engineer Intern

Jan 2024 – Apr 2024

- Contributed to serverless backend for a job search platform using **Go** and **GCP Suite** - Pub/Sub, Cloud SQL
- Created asynchronous candidate processing pipeline leveraging goroutines and channels for efficient handling
- Strengthened API security through adoption of short-lived access tokens paired with long-lived refresh tokens, replacing single JWT approach

PROJECTS

StudySync | Collaborative Project

Jul 2025 - Present

- Co-founded and led backend development for a real-time social productivity mobile app projected to support thousands of concurrent users using **Spring Boot**, **Redis**, and **PostgreSQL**
- Built real-time communication layer using Spring **WebSocket** for instant broadcast and live collaboration features
- Reduced requests latency by **50%** via introducing **Redis** caching across backend request lifecycle with appropriate invalidation and cache-aside patterns
- Implemented end-to-end observability using **Prometheus** metrics, **Tempo** tracing, **Loki** logging, and custom **Grafana** dashboards for enhanced incident detection and data analytics

JustJio | Personal Project

Jul 2024 - Present

- Led a 6 person team to deliver an open-source event planning platform in 3 months using **Go** (Fiber/GORM), **React**, and **PostgreSQL** while observing proper SDLC practices
- Designed and maintained an event-driven microservices architecture with decoupled **WebSocket** server consuming/producing **Kafka** topics for real-time chat
- Optimized DB performance through connection pooling, query tuning, composite indexes and materialized views, achieving **sub-500ms** API response times
- Automated production-ready CI/CD pipeline with **GitHub Actions**, including linting, formatting, concurrent builds, **~80%** test coverage, SonarQube analysis, Trivy security scans, and multi-environment deployments
- Deployed built image to **Kubernetes** cluster (self-managed bare-metal lab) with zero-downtime rolling updates

SKILLS

- **Programming Languages:** Golang, Java, Python, JavaScript/TypeScript, C/C++
- **Technologies:** React/Vue/Angular, Spring Boot, Docker, Kubernetes, SQL/noSQL, Redis, GCP/AWS/Azure
- **Languages:** English (Native), Mandarin (Native), Malay (Proficient), Japanese (Beginner)