

# ROWEN TEY KAI SEONG

(+65) 8884 7803 | [kaiseong02@gmail.com](mailto:kaiseong02@gmail.com)

[linkedin.com/in/rowentey](https://www.linkedin.com/in/rowentey) | [github.com/RowenTey](https://github.com/RowenTey) | [rowentey.xyz](http://rowentey.xyz)

Malaysian PR

## EDUCATION

---

### Nanyang Technological University, Singapore

Aug 2021 – Dec 2024

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

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

## WORK EXPERIENCE

---

### IDEMIA, 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 multiple publisher single subscriber pattern with multiprocessing, reducing generation time for 10 million test 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

### IDEMIA, 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 infra 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 mechanism 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 connected to **Redis** Pub/Sub 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 self-managed on-prem cluster 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)