

Wong Sheen Kerr

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Work experience

DSTA | Software Engineer

Aug 2026 - Present

Nested Technologies | Software Engineer Intern

Jan 2026 - Jul 2026

- **Payments & billing:** Independently implemented production Stripe billing for SaaS, including data models, webhooks, checkout, customer synchronisation and Django Admin tooling. Launched live payments ahead of Echelon E27.
- **Anti-abuse:** Deployed Redis-based IP sign-up blocking for Mailmail, blocking approximately 10 abusive sign-ups per week. Added domain blocklists, CSV import, subdomain matching and admin banning tools.
- **Cloud & CI/CD:** Migrated frontend hosting from ECS to CloudFront and fixed manual staging updates. Updated GitHub Actions to create new ECS task definitions on each push, resolving stale container deployments.
- **Configuration & security:** Moved application secrets to AWS Systems Manager Parameter Store and public configuration to S3. Configured custom-domain email infrastructure with MX, SPF and DMARC records.
- **Database design:** Replaced pricing JSON blobs with normalised SQL tables, foreign keys, GIN indexes and a materialised view. Implemented attribute formulas, minimum-order logic and serializer-based import/export.
- **Backend reliability:** Resolved stalled sign-up verification by reducing the demo dataset and moving imports into Celery background jobs. Shipped email verification and Google SSO, then debugged production delivery and login issues.
- **AI/LLM:** Refactored integrations around OpenAI-compatible APIs and shipped primary/fallback model preferences, reasoning controls and usage tracking across the backend, database and frontend.
- **Mentoring:** Onboarded interns on AWS, CI/CD and Stripe; reviewed bug fixes and wrote documentation

Technical skills

Languages: Python, SQL, Java, TypeScript, JavaScript, R

Backend & data: Django, FastAPI, Celery, PostgreSQL, Redis, Microsoft SQL Server, Firebase

DevOps: Amazon Web Services, Google Cloud Platform, Docker, GitHub Actions, Git

Frontend & testing: React, React Native, Material UI, Vitest, Figma; Agile/Scrum

Additional tools: PyTorch, TensorFlow, Tableau, UiPath, ASP.NET Core, JavaFX

Projects

PeerPrep, NUS | Developer

Aug 2025 - Dec 2025

- **API gateway:** Built a FastAPI gateway for a microservices application, handling request routing, authentication and service-to-service communication.
- **Deployment:** Deployed Docker services on Google Cloud Run with service configuration and ingress controls. Automated builds and releases using GitHub Actions, Artifact Registry and Pub/Sub-triggered redeployments.

SQLancer, NUS | Developer

Jan 2025 - May 2025

- **Web interface:** Prototyped in Figma and built a React/Material UI interface for the SQLancer CLI, including a real-time graph dashboard, bug reporting, documentation and comments. Tested components with Vitest and integrated CI/CD checks.

Distraction Dismantlers, NUS Orbital | Developer

May 2024 - Aug 2024

- **Mobile development:** Built a student focus and peer-support app with React Native, TypeScript and Firebase authentication/database services. Worked with one developer across three Agile sprints.

Education

National University of Singapore

Aug 2023 - Jun 2026

Bachelor of Computing in Computer Science, **Honours with Distinction**

Focus Area: [Database Systems \(Merit\)](#) & [Software Engineering \(Merit\)](#)

Coursework: Data Structures & Algorithms, Software Engineering, Cloud Computing, AI with PyTorch, Data Analytics with R

Korea University

Dec 2023 - Jan 2024

International Winter Campus: Statistics and Probability, **A+**

Ngee Ann Polytechnic

Apr 2018 - May 2021

Diploma with Merit in Financial Informatics, specialising in Financial Analytics

Coursework & projects: AI/ML, financial systems, RPA web scraping, image classification and Full Stack Dev