

Kok Shan Jin

+65 97562966 | shanjinkok@gmail.com | shanjin.dev | linkedin.com/in/shanjin-kok

PROJECTS

- Agent CFO** | *Python, RAG, BM25, Vector Search, LLMs* 2026
- Built a retrieval-augmented generation (RAG) agent for a DBS challenge using hybrid retrieval that combines BM25 keyword search with vector embeddings.
 - Evaluated retrieval quality with Recall@K and MRR to compare and tune retrieval strategies.
- AI Job Matching Platform** | *Python, Flask, NLP, OpenAI API* Apr 2025
- Built a resume-to-job matching system that extracts skills and experience and ranks listings by relevance using TF-IDF, embeddings and semantic similarity; generated personalised cover letters with the OpenAI API.
 - Awarded a Certificate of Excellence at the NUS Guru AI Innovation Hackathon.
- AI Android Fitness Application** | *Kotlin, Google ML Kit, ARCore, Google Maps* Mar 2025
- Built an Android app to improve IPPT performance, with AI pose detection to count push-up and sit-up reps and check form in real time, AR form tutorials and GPS-based 2.4km run tracking.

EDUCATION

- Singapore Institute of Technology** Aug 2023 – Aug 2027
Bachelor of Engineering (Honours) in Information and Communications Technology, Software Engineering
- Republic Polytechnic** Apr 2018 – Apr 2021
Diploma in Information Technology
- Edusave Merit Bursary; Certificate of Academic Achievement (twice); Top 25% of cohort

WORK EXPERIENCE

- PSA International** | *Global PORTNET Intern* May 2026 – Apr 2027 (expected)
- Built end-to-end automation suites in Playwright and TypeScript (Page Object Model) to validate port-side cargo import/export and vessel-side operations modules after migration from UAT to production, against live SSO and backends, with three-layer verification (UI, read-only SQL checks, audit-event assertions) and automated evidence reports.
 - Uncovered and fixed defects through automation, including date parsing errors, wrong-row updates and duplicate-key clashes.
- NEC Asia Pacific Pte Ltd** | *Assistant Engineer* Feb 2021 – Apr 2021
- Developed a mobile app for real-time inventory tracking with barcode scanning and push notifications, extending the company's inventory system; led usability and reliability testing.
- NEC Asia Pacific Pte Ltd** | *Application Developer* Sep 2020 – Jan 2021
- Built an inventory management website with movement tracking, automated notifications and usage analytics, translating stakeholders' operational requirements into features.

CERTIFICATIONS

- Professional Scrum Master I (PSM I), Scrum.org** 2026
- Dataiku Core Designer, Dataiku** 2026

ACTIVITIES & INVOLVEMENT

- SIT Handball** | *Varsity Player* Sep 2023 – Aug 2026
- Won 3rd place at the Institute-Varsity-Polytechnic (IVP) Games 2026; competed in the Tertiary Handball Invitational Championship 2024 and 2025.
- Tech Mentor** | *National Youth Tech Championship* Jul 2025
- Featured in The Straits Times for mentoring students programming AI drones in Python at an IMDA and Google Cloud challenge.
- DSTA BrainHack Hackathon**
- Designed a mobile app architecture and wireframe prototype Jul 2024

Orientation Leader (Helix) & Volunteer (HWWS)

- Mentored freshmen; distributed care packs to families

2023 – 2025

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, Java, Kotlin, C, C++, SQL, HTML5, CSS3

Frameworks & Libraries: React, Angular, Node.js, Express.js, Flask, SQLAlchemy, Flutter, Jetpack Compose, ARCore

AI & Data: RAG (hybrid BM25 + vector search), NLP (TF-IDF, embeddings), OpenAI API, Google ML Kit, YOLO, Dataiku

Testing & Quality: Playwright, Page Object Model, Espresso, BDD (SpecFlow), SonarQube, Postman, requirements traceability

Databases & Messaging: MySQL, PostgreSQL, SQLite, MongoDB, Kafka, MQTT

Cloud & DevOps: AWS (EMR), Google Cloud, Docker, Kubernetes, Apache Spark, GitHub Actions, Azure DevOps, Git, Vercel

Security: Mobile app security testing with Burp Suite, MobSF, Frida, JADX

Practices: Agile/Scrum, OOP and design patterns, formal verification (SPIN, Frama-C)