

# Cleon Liew Ge Wei *Software Engineer | Full-Stack | Applied AI Systems*

+65 85339313 | [✉ cleonliew06@gmail.com](mailto:cleonliew06@gmail.com) | [🔗 github.com/khulon](https://github.com/khulon) | [🔗 linkedin.com/in/cleonliew](https://www.linkedin.com/in/cleonliew)

## EDUCATION

### National University of Singapore (NUS)

Aug 21 – Jul 25

Bachelor of Engineering in Computer Engineering

- **Certifications:** Intelligent Systems, Software Engineering Capstone, Interactive Digital Media
- **Coursework:** Data Structures & Algorithms, OOP, Machine Learning, Databases, Design, Fuzzy/Neural Systems

## WORK EXPERIENCE

### Home Team Science and Technology Agency (HTX) | Software Engineer Internship

May 24 – Aug 24

- Designed and deployed an **LLM-powered chatbot platform** using **Python, RAG and vector search** to support operational decision-making for public-sector stakeholders
- Developed and trained a **machine learning intent classification** pipeline using **RASA and Python** to improve chatbot routing accuracy and response relevance
- Architected backend services integrating **MongoDB** and **Elasticsearch** to support low-latency, scalable retrieval across large document corpora
- Developed a real-time data visualisation dashboard in **React** with **advanced search** and analytics to improve stakeholder insights and evaluation

### Eng Kong Holdings | Software Engineer Internship

May 23 – Aug 23

- Led **end-to-end development** of a cross-platform claims management system using **React and Python**, digitizing manual workflows and reducing claim processing time from weeks to hours
- Designed system architecture and **UI/UX prototypes in Figma**, translating user feedback into production-ready technical designs
- Implemented **JWT-based authentication** and frontend caching to improve security, and system reliability.
- Designed **RESTful APIs** and backend service layers to support scalable frontend integration and future expansion
- Deployed backend services on **Node.js** and integrated **SMTP-based notification pipelines** to enable real-time claim status updates for stakeholders

## PROJECTS (Production & Live Systems)

### 🔗 DistAlarm iOS App | Swift, SwiftUI, CoreLocation, ActivityKit

- Published a location-based alarm iOS app with ongoing updates, **600+ downloads** & consistent daily active usage
- Engineered reliable **geofencing** alarm using **CoreLocation** with proximity fallback for iOS background limitations
- Delivered a polished end-user experience and Integrated Live Activities to display **real-time distance tracking**

### 🔗 Detecto Online Puzzle Game | JavaScript, React Native Web, PostgreSQL, Vercel, LLM

- Developed a **cross-platform** unique LLM web-based puzzle game with **scalable frontend** architecture
- Led **frontend architecture, SEO, analytics**, and implemented persistent user state management
- Collaborated on production hardening with **rate limiting, CAPTCHA turnstiles, and traffic protection**, achieving **2000+ players during open beta**

### 🔗 SQFleetInfo Route Tracking Website | JavaScript, React, Firebase, Stripe, Vercel

- Built a domain-specific **analytics platform** for Singapore Airlines pilot candidates, enabling at-a-glance visualisation of fleet data, routes, and operational patterns
- Designed a freemium architecture with **authentication, and Stripe subscriptions**, generating monthly revenue
- Developed **data pipeline** combining scraped and manually curated data, cleaned for querying and analytics

### 🔗 BriefPal Telegram Bot | JavaScript, Node.js, PostgreSQL, Supabase, Prisma, Stripe, Vercel

- Built a **serverless Telegram bot** for active pilots, delivering personalised route-based reports and weather charts
- Architected **serverless webhook** handlers on Vercel with **session persistence** & multi-step user interactions
- Implemented **Stripe webhooks**, subscription handling & **rate limiting** to support freemium monetisation model

## SKILLS

- **Languages:** C/C++, Java, Python, JavaScript, SQL, Swift
- **Frontend & Backend:** React, React Native Web, SwiftUI, Node.js, REST APIs, RASA, Figma
- **Data & Infra:** PostgreSQL, MongoDB, Elasticsearch, Firebase, Vercel, Stripe, Webhooks, Prisma, Supabase
- **AI Systems:** LLMs, RAG, Vector Search, Intent Classification
- **Hobbies:** 3D Printing, A cappella, Content Creation, Tennis, Singing, Designing apps, Aviation

## LEADERSHIP & ORGANISATIONAL IMPACT

### Vice-President, NUS A cappella

Aug 24 – Aug 25

- Represented the group in public-facing engagements, building and maintaining partnerships with university bodies, sponsors, and external performers
- Led strategic planning and execution of a flagship **concert with 1,000+ attendees**, overseeing end-to-end marketing, logistics, and stakeholder coordination
- Drove ticketing and revenue strategy, generating over **\$20,000 in concert sales** through targeted promotions and partnership outreach

### Projects Manager, NUS A cappella

Aug 23 – Aug 24

- Served as the primary liaison for external partners and high-profile clients, including the **Ministry of Manpower, Gardens by the Bay, Esplanade, and Resorts World Sentosa**
- Managed production schedules, rehearsal timelines, and resource allocation to support performances across a **100+ members roster**
- Represented the organization on-site at live events, leading client relations, public-facing communications, and post-event follow-ups to strengthen partnerships and secure repeat engagements

### President, NUS Raffles Hall A cappella

Aug 22 – Aug 23

- Led and managed a **30-member** performing group, overseeing training, performance planning, and committee coordination
- Achieved the **highest hall-level award** for excellence and contribution to student life through sustained performance quality and leadership
- Collaborated with music directors and external partners to deliver high-quality productions and audience engagement

### Vice-Captain, NUS Raffles Hall Tennis

Aug 22 – Aug 23

- Led structured training programs that advanced the team to the **semi-finals** in inter-hall competitions
- Contributed to the team securing a **Hall Gold Award** through performance planning, match preparation, and team coordination
- Liaised with external coaches and sports directors to align training objectives, competition strategy, and player development plans

## NATIONAL SERVICE

### Singapore Armed Forces National Service | Military Police Guard Commander

Apr 19 – May 3

- Commanded and managed a platoon of **~30 personnel**, overseeing manpower planning, duty rosters, and operational readiness across rotating day and night shifts
- Led **12-hour operational shifts** in high-responsibility environments, making time-sensitive decisions to ensure security, safety, and continuity of operations
- Planned and executed training programs, drills, and operational briefings to maintain discipline, performance standards, and mission readiness