KIERAN HO CHENG HONG

Penultimate Year | Availability: May 2026 - Dec 2026

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EDUCATION

National University of Singapore (NUS)   *Aug 2023 - Present*

Degree: **Bachelor of Science in Business Analytics, Honours**
- Current GPA: 4.41/5.00, Specialising in Financial Analytics and Machine Learning
- Previously pursued: **Bachelor of Engineering in Computer Engineering, Honours**

WORK EXPERIENCE

AI & Engineering Intern | Synapxe Pte Ltd   *Jun 2025 - Present*
- Implementing cloud-based encryption pipeline leveraging PowerShell, Python watchdog, SQS, and auto-scaling EC2 workers to automate SLIFT file encryption, **providing an additional layer of end-to-end security** while **minimising overhead and costs** in Singapore's national healthcare analytics platform (HEALIX)
- Supporting Databricks integration into HEALIX for **unified data governance** and **streamlined workflows**
- Conducted security validation of AppStream 2.0 streaming for Databricks, uncovering a whitelisted URL extended beyond intended use cases, leading to **improved whitelisting policies** and **enhanced security**

Programming Methodology TA | NUS   *Aug 2024 - Dec 2024*
- Taught programming fundamentals in C to class of 12 students through weekly laboratory sessions and coding projects, conducting code reviews through AI-augmented workflows and automated scripting on GitHub, obtaining **4.7/5.0 for student feedback**, as well as being **nominated for Teaching Excellence Award**

Military Pilot | Republic of Singapore Airforce   *Aug 2021 - Jan 2022*
- Led briefs for pilot trainee onboarding and wrote documentation for Airforce Recruitment Centre office workflows, **reducing trainee onboarding time by 50%** and **reducing document processing errors by 80%**
- Underwent flight school training in Perth, learning to fly CT4B training aircraft

PROJECT EXPERIENCE

Sentiment-Driven Trading Strategy | Quantitative Strategy   *Jul 2025 - Present*
- Built a sentiment-driven market timing strategy using GDELT news tone as a proxy for investor confidence, using volatility spikes and sentiment-price deviation (pairs trading) as signals to time trades; **outperformed the S&P 500 by ~2.5% annually from 2015–2025**

Amazon Electronic Product Recommendation Model | Machine Learning Model   *Feb 2025 - Apr 2025*
- Collaborated on Amazon product recommendation system leveraging deep-learning combined with sentiment analysis in a team of 5 to **improve prediction of products customers are likely to buy**
- Integrated sentiment analysis pipeline for review data to **drive improvements of 31% and 54%** in NDCG and MAP, **raising accuracy of predictions from 50% to 70%**

Travla / Travlah! | Software Development   *May 2024 - Apr 2025*
- Prototyped iOS travel planner featuring an itinerary planner, map view with routing integrated using Google Maps API, cost breakdown and packing list to **condense different aspects of travel planning into one app**
- Added web application with extended functionality for **cross-platform support** to provide wider coverage for users

Historical Analysis of Beijing Housing Market | Exploratory Data Analytics   *Aug 2024 - Nov 2024*
- Leveraged SQL with geospatial Tableau dashboards for exploratory analysis in Beijing housing market, **identifying several areas with high-return housing configurations** in central and underdeveloped districts

SKILLS & INTERESTS

Programming Languages	Java	Python	R	SQL	HTML	CSS	JavaScript	TypeScript	C	C++
Databases & Cloud	MySQL	Supabase	Firebase	AWS	Databricks	Informatica
Frameworks / Libraries / Tools	PyTorch	NumPy	pandas	React	Next.js	Expo	Tableau	Git/GitHub	Vue
Languages	Fluent English, Chinese	Conversational Indonesian	Basic Japanese
Personal Interests	Rugby	Dragon Boating	Blacksmithing	Solo Travel	Strategy Games