Nickolas Chua

(+65) 9694 1972 | nchua015@e.ntu.edu.sg | www.linkedin.com/in/nickolaschua | github.com/nickolaschua

EDUCATION

Nanyang Technological University — **Aug 2025 – Present**
Renaissance Engineering Programme Scholar
- Bachelor of Engineering Science (Computer Science) with a minor in Mathematics
- Master of Science in Technology Management

Nanyang Junior College — **Jan 2020 – Dec 2022**
GCE A-Level
- Academics: 88.75 / 90 RP

PROFESSIONAL EXPERIENCE

Tech Incubator at Queens College, New York — **Dec 2025 – Jan 2025**
Software Engineering Intern
- Shipped **RentAShelf.co**, a live full-stack marketplace connecting store owners with brands, by using **Next.js**, **TypeScript**, and **Supabase (PostgreSQL)**, turning a founder's concept into a production-ready product.
- Engineered a custom **Stripe Connect payments pipeline** to automate complex multi-party financial flows, including real-time platform fee collection and vendor payouts

WorldQuant — **May 2025 – Dec 2025**
BRAIN Research Consultant
- Conduct quantitative research developing **trading alphas** using **BRAIN API**, applying **statistical arbitrage** and **factor-based strategies** across global equity markets

CO-CURRICULAR ACTIVITIES

SingHacks 2025 — **October 2025**
2nd Runner-Up
- Engineered **TripMate** in 48 hours, automating travel quotes under 2 minutes via **TesseractOCR** and **Groq** while implementing a voice-enabled **RAG** pipeline with **OpenAI Whisper** and **ElevenLabs** for real-time policy retrieval.

NTU x CEIT Baringa International Trading Case Competition 2025 — **October 2025**
1st Place
- Developed an **LNG trading optimization model** by combining forward curves, **ARIMA-GARCH forecasting**, and **Monte Carlo simulation** to quantify price trends, volatility, and risk metrics
- Designed and implemented NYMEX futures-based hedging strategies to manage procurement risk and optimize the portfolio's risk-return profile

Cursor Hackathon Singapore — **October 2025**
Participant
- Built Kopitiam Capital (ongoing project), an accessible, **AI agent-powered** alternative to Bloomberg for retail traders
- Leveraged technologies like **Groq**, **mem0**, **ElevenLabs**, **Supabase**, and **Smithery MCP** to develop an agentic framework offering back-testing, sentiment analysis, continuous market monitoring, and automated market reporting

GovTech AI Capture the Flag 2025 — **October 2025**
Top 5%
- Full-cleared all challenges in under 12 hours using machine learning and adversarial techniques

TikTok TechJam 2025 — **August 2025**
Participant
- Developed **BERTBERT**, a **multi-tower deep learning model** that processed **100K+ reviews** using **20 metadata inputs** and a custom labelling solution surpassing **GPT-4o**, utilizing **cross-attention** to classify restaurant feedback despite severe class imbalance.

NTU x Base Hackathon 2025 — **August 2025**
2nd Runner-Up
- Developed "**WellnessBuddy**" fitness tracker using **Virtuals Protocol's Python SDK** and **Agent Commerce Protocol**, implementing **hierarchical AI agent architecture** managing **on-chain** transactions via integrated **smart contracts**

International Quant Competition 2025 — **June 2025**
Top 1%
- Achieved **top 1%** placement among **80,000 worldwide** participants in **alpha research** using BRAIN platform

SKILLS & CERTIFICATIONS

Languages: Python, TypeScript, C#, Fast Expression

Tools: PyTorch, TensorFlow, Keras, Scikit-Learn, NumPy, Pandas, Polars, Git, LangGraph/LangChain, PostgreSQL

Certifications: Machine Learning with Python (FreeCodeCamp), Data Analysis with Python (FreeCodeCamp), Foundational C# (Microsoft), Computer Vision (Kaggle), Feature Engineering (Kaggle)