

**Tony Koo**<https://lmdlifers.github.io/><https://github.com/LMDLifers>[tonykooyelong@u.nus.edu](mailto:tonykooyelong@u.nus.edu), +65 8511 2579

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**EDUCATION****National University of Singapore (NUS)***Bachelor of Science (Business Analytics)***Singapore**

August 2023 – Present

- **Grade:** Honours with Merit
- **Awards:** University Engineering Scholarship, Sustainability Exchange 2024 Champion
- **Projects:** Smoodee, IBKR Algo Bot, MWH Website Dev
- **Relevant Coursework:** Programming Methodology, Data Structures and Algorithms, Econometrics

**Temasek Polytechnic****Singapore***Diploma in Accountancy & Finance*

April 2018 – May 2021

- **Grade:** Diploma with Merit
- **Awards:** Letters of Appointment: A&F Vice-President and Business EXCO, ISCA award
- **Projects:** Value at Risk, Simulated Portfolio Management, WireCard, YouCard, Portz
- **Relevant Coursework:** Accounting, Economics, Financial and Risk Analysis, FinTech, Tax Management

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**WORK EXPERIENCE****SKEZI****Paris, France****Data Scientist Intern**

Jul 2025 – Dec 2025

- Architected an Advanced RAG pipeline with MultiQuery Retrieval and FAISS-backed semantic caching, reducing LLM API costs and optimizing latency via mean-pooled embeddings.
- Developed an automated data collection pipeline using Computer Vision for PDF extraction and conducted R&D on medical questionnaire image processing.
- Optimized production pipelines using asyncio for a 4.7x processing speedup and executed a strategic model migration that slashed API costs by 80%.
- Executed advanced Prompt Engineering (system instructions & few-shot prompting) to align the chatbot's tone with medical guidelines and significantly reduce hallucination rates.
- Refined topic detection using HDBSCAN and Mistral-based Zero-Shot labeling, while ensuring GDPR compliance via automated P.I.I. redaction pipelines.

**Tradition Energy****Singapore, Singapore****Quantitative Developer Intern**

May 2024 – August 2024, May 2025 – July 2025

- Developed and implemented VBA-driven financial models for forward swap contracts, enhancing client satisfaction and driving successful project outcomes
- Managed server-based spreadsheets encompassing multiple financial instruments, created a centralized workflow with python, thereby improving efficiency by 5 hours and calculation speed from 6.09s to 0.86s.
- Conducted implementation of Nelson-Siegel, Svensson, and monotone convex to yield curve constructions on VBA driven spreadsheets, resulting in more robust calculations for client-facing materials
- Contributed to the development of new financial products by combining market data analysis and modelling expertise, leading to the launch of 2 new instruments in the energy market, expanding business portfolio
- Developed correlation analytical solutions with Bloomberg API calls and VBA with sorting algorithms.

**Tradition Energy****Singapore, Singapore****Middle Office Analyst Intern**

September 2020 – May 2021

- Spearheaded the onboarding of 20+ international clients, streamlining existing SOPs.
- Coordinated with trading desks and operations teams to ensure accurate execution of high-volume trades, streamlining the process to reduce errors, and improving overall operational efficiency
- Worked closely with the London HQ and other regional offices to ensure smooth transactions across time zones, improving coordination and communication between global offices, reducing time-lag in work output

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**SKILLS, ACTIVITIES & INTERESTS****Technologies:** Python, SQL, Java, Javascript, AWS, R, VBA, Tableau, Figma, Microsoft Excel, Word & Powerpoint**Spoken Languages:** English (Native), Chinese Mandarin (Intermediate), French (Basic)**Certifications & Training:** Chartered Financial Analyst (CFA) Foundations**Competitions:** Deloitte, WireCard FinTech, YouCard, Sustainability exchange