

Alvin Ku

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EDUCATION

The University of Hong Kong (HKU), BSc FinTech, 2nd Major in Finance Sep 2021 – Jan 2026

- **Modules:** mathematical finance, investment portfolio, data mining, machine learning, NLP, blockchain, web3
- **Leadership:** Vice President of HKU FinTech Association; Tutor at the School of Computing and Data Science
- **Oversea study experience:** United Kingdom and Denmark

EXPERIENCE

Entrepreneur Nov 2024 – Now

- Co-founded a startup with a team of five, driving innovation in aviation sustainability through product development, solution design, and stakeholder communication
- Designed AI-powered waste management optimization, IoT monitoring solutions, automated reporting pipeline
- Won a Greater Bay Area regional hackathon, and secured project support by Cathay Pacific Airways and funding by the Hong Kong SAR Government

The University of Hong Kong (HKU), Research Project Sep 2024 – Dec 2024

- Developed market-neutral long/short US equities strategy to achieve a Sharpe ratio of 1.0 across mid and large-cap universe with sub-industry neutralization over 8-year backtesting period
- Extracted alpha signals from 40 million entries of employee reviews textual data by implementing a deep learning-based NLP pipeline for features extraction
- Researched signal optimization and systematic asset allocation techniques with extensive risk management and backtesting, resulting in enhanced risk-adjusted returns and improved drawdowns

Morgan Stanley, Technology Summer Analyst June 2024 – Aug 2024

- Designed and implemented machine learning algorithms to enhance cybersecurity monitoring and threat hunting pipelines using Python & Linux, improving speed and accuracy while reducing false positives
- Collaborated with multi-regional stakeholders to design scalable, real-time data processing solutions, generating actionable intelligence and risk mitigation strategies
- Automated alerting workflow by integrating new system into existing infrastructures, enhancing efficiency and reducing incident response times

Hong Kong Monetary Authority (HKMA), Analyst Programmer June 2023 – Jan 2024

- Performed in-depth quantitative research on regulatory reporting data from 100+ banks, providing monthly risk analytics and insights for strategic decision-making
- Developed graph-based data mining methods in Python to analyze inter-bank client money transfers and detect anomalies, enhancing transaction monitoring and compliance capabilities
- Researched global regulatory framework on stablecoins and virtual assets trading platforms, preparing reports to support policy development and risk management

Li & Fung, Summer Intern July 2022 – Aug 2022

- Utilized AWS cloud services and NLP techniques (including sentiment analysis, topic modelling) to extract insights from 100,000+ customer reviews to support data-driven decision-making in supply chain
- Created interactive data visualization dashboards in Tableau to monitor KPIs for management and stakeholders
- Streamlined financial workflow through BPMN 2.0 diagrams to enhance operational efficiency and compliance

OTHERS

Language: Native English and Chinese (Cantonese and Mandarin)

Programming language: Proficient Python with experience in libraries such as Pandas, NumPy, SciPy, Matplotlib, Scikit-learn, PyTorch, Keras, Transformers, SQLAlchemy, Requests, Flask | Foundational knowledge with C++, Java, Scala, Web technologies, and Linux tools

Certification: AWS Certified Cloud Practitioner Certification, Scrum Alliance Certified ScrumMaster Certification