

SANINGO, Saruni Martin

(852) 9055-7671 | sir.ningo@gmail.com | ssaningo2-c@my.cityu.edu.hk |
[linkedin.com/in/saruni-saning-o](https://www.linkedin.com/in/saruni-saning-o) | [sarunimartin.com](https://www.sarunimartin.com)

EDUCATION

City University of Hong Kong, Hong Kong — Undergraduate
SEPT 2023 - JUNE 2027 (EXPECTED GRADUATION)

- BSc. in Computer Science. (Minor in Finance)

WORK EXPERIENCE

O2EZ, Hong Kong — Data Science Intern
JUNE 2026 - PRESENT

- Building a Graph Neural Network (GNN) for taste preference prediction to power food recommendation systems.
- Developing a comprehensive graph database on Neo4j by incorporating data from diverse sources, including chemical reaction data extracted by AI from food chemistry textbooks, disease data, metabolite and compound data, and recipe data from various online databases.

eWalker Consulting (HK) Ltd, Hong Kong — Associate Consultant on AI in Cybersecurity Development
SEPTEMBER 2025 - PRESENT (Expected Completion: May 2026)

- Researching and evaluating AI models for penetration testing automation, contributing to the firm's AI-powered offensive security toolkit.
- Developing a Retrieval-Augmented Generation (RAG) system using vector databases and prompt engineering to automate and standardize security audit report generation.
- Implementing document parsing and vector database pipelines to enhance context-aware AI responses, improving report accuracy and compliance with security standards.

Huang He Consultancy, Singapore — Creative Developer Intern
JUNE 2025 - AUGUST 2025 (8 WEEKS)

- Designed and developed responsive websites using frameworks such as Figma, React and CMS such as Wordpress, optimizing UX/UI and implementing performance enhancements.
- Collaborated with stakeholders to translate business needs into digital solutions, ensuring seamless functionality and brand alignment.
- Conducted website testing, debugging, and content/plugin updates while proposing creative improvements to elevate user experience.

DF Group Ltd, Hong Kong — Research and Investment Analyst
JULY 2025 - AUGUST 2025 (8 WEEKS)

- Analyzed investment trends and risk factors, preparing detailed research reports, financial models, and pitch decks to support investment committee decisions.
- Conducted due diligence on potential investments through financial analysis, market research, and competitor benchmarking to identify key risks and opportunities.
- Applied screening tools including AI-powered and automated financial modeling techniques to improve efficiency in evaluating market opportunities and portfolio performance.

PROJECTS

Real-Time Market Analytics Engine — C++, Rust, Low Latency, TypeScript

- Engineered a C++20 market-data ingestion core — lock-free SPSC ring buffers, a memory-pooled L3 limit order book, and nanosecond timestamping — sustaining ~5.6M events/sec end-to-end with zero allocations on the hot path.
- Integrated live Binance WebSocket feeds over a custom minimal TLS client (L2 depth normalized into synthetic L3 orders), alongside a deterministic matching-engine simulator with a regime-switching market model for reproducible load testing.
- Streamed events across a zero-copy shared-memory bridge into a Rust analytics layer computing multi-interval OHLCV, VWAP, spread, and median/MAD anomaly detection — archived to Parquet and broadcast over WebSockets to a real-time TypeScript dashboard.

16-Bit Custom Processor Design — Digital Logic, Assembly, Computer Architecture, ISA Design, Logisim

- Designed and implemented a functional 16-bit processor in Logisim featuring a custom Instruction Set Architecture (ISA). The processor supports R-type and I-type instructions, including arithmetic, bitwise logic, memory operations (Load/Store), and control flow (Branching, Call/Return).
- Developed the machine code for test programs to validate data memory handling and register-to-register operations.

Multi-Layer Security Pipeline for AWS Bedrock Agents— AWS Bedrock, Lambda, WAF, Prompt Injection Defence, Hallucination Detection.

- Built a defensive pipeline combining AWS WAF for network-layer filtering, Bedrock Guardrails for content moderation, custom Lambda-based preprocessing for prompt injection detection, and hallucination checks.

- Conducted systematic empirical evaluation measuring latency, cost, robustness against adversarial inputs, and output reliability compared to unsecured Bedrock deployments.

Instant 3D Scene Reconstruction — VGGT, Quantization, 3D Geometry, Computer Vision.

- Developed a Python-based 3D reconstruction engine using Visual Geometry Grounded Transformers (VGGT).
- Optimized for local execution via 4-bit quantization (W4A8), enabling high-fidelity 3D scene generation from unordered image sets on consumer hardware.

Lock-Free L3 Order Book Engine — C++, Data Structures, Performance Optimization

- High-performance, zero-allocation order book implementation in C++20 for quantitative trading, featuring lock-free SPSC queue for market data ingestion, intrusive red-black tree for price levels, and object pools eliminating heap allocation on the hot path.
- Includes event-driven backtester with EMA crossover and VWAP signal engines, Sharpe ratio computation, and nanosecond-precision latency histograms. Benchmarks at 5.6M messages/sec with ~50ns average latency per operation on Apple M2.

Stock Analysis Sandbox — Next.js, API Routes, Financial Analysis

- A market analysis sandbox that ranks stocks and crypto with fully transparent reasoning. Runs technical analysis on real Yahoo Finance price history (RSI, MACD, moving-average trends) and uses CoinGecko data for crypto community sentiment, with a custom Next.js API route for analysis.

Coursework Related Projects, Hong Kong — HTML, CSS, JavaScript, Java, C++, Visual Paradigm

- Collaboratively built a Java desktop application for budget tracking and expense analysis, featuring data persistence and reporting.
- Developed an Equipment Lending Club system in Java with member and inventory management employing good software design principles and patterns.
- Designed a Drone Management System using Visual Paradigm, creating UML diagrams (class, sequence, use-case) to model autonomous delivery workflows.

LEADERSHIP EXPERIENCE / OTHER ACHIEVEMENTS

CityUHK Career and Leadership Office — Student Ambassador

2025 - PRESENT

- Greet VIPs and guests at university-wide campus tours, exhibitions, conferences, and networking events.
- Share university updates and experiences in school talks and promotional channels, and create videos, visuals, and social media content as a CityU digital ambassador.
- Support academic units and offices in delivering professional customer service across various activities.

CityUHK Hall 15 — Residence Tutor

JULY 2025 - PRESENT

- Provide proactive pastoral care and support to residents of Hall 15, fostering a safe, inclusive, and engaging community.
- Assist the Residence Master in implementing hall culture initiatives and year-long activity plans, contributing to student development and community well-being.

Global Ambassadors Club (GAC) — Student Welfare Officer

DECEMBER 2024 - NOVEMBER 2025

- Act as a liaison between non-local students and university administration, addressing concerns and improving student welfare initiatives.
- Coordinate with various non-local student organizations to boost participation in campus life, strengthening community ties.
- Develop communication strategies to effectively promote events and initiatives, increasing involvement among students.

Computer Science Student Chapter — Operations Lead

NOVEMBER 2023 - OCTOBER 2024

- Oversaw the sourcing of promotional items for the Computer Science Student Chapter, enhancing brand visibility and fostering a sense of community among members.
- Ensured the smooth functioning of the Computer Science Student Chapter website, managing updates, troubleshooting issues, and implementing improvements to maintain an engaging online presence.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, Rust, SQL, JavaScript, TypeScript, HTML/CSS, MIPS Assembly

Technologies: LangChain, LlamaIndex, Graph Neural Networks, Git, MongoDB, MySQL, Neo4j, CMS (e.g Wix & Wordpress), Figma, BlueJML, Visual Paradigm, Linux, Firebase, AWS, React, Node.js, Bootstrap, Django, RestAPIs, Three.js, AI Coding Agents (Claude Code, Kimi Code, Qwen Code)

ADDITIONAL INFORMATION

Languages: English (TOEFL 104 & Duolingo 140), Spanish, Swahili, Chinese - Mandarin (Beginner)

Interests: Football, Investment, Film and TV, Books, Religion, Hiking, Cycling, Gaming and Programming challenges