Nisan Harmanci

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Education

City University of Hong Kong — Hong Kong
Bachelor of Science in Computer Science - Cybersecurity — *Aug 2021 – Oct 2025*
Awarded HKD 500,000+ for academic merit.
Dean's List.

Middlesex University — London
Summer Exchange — *May 2025 – Jun 2025*

Professional Experience

Software Developer Intern — Dec 2024 – Jan 2025
Expando — *Science & Technology Park, Hong Kong*

- Developed and pushed critical features for the startup's flagship project, enabling its beta release.
- Leveraged GitLab for version control and **CI/CD automation** to streamline workflows in a hybrid team.
- Designed and seamlessly integrated Next.js components with the PostgreSQL production database.

Project Research Assistant — Jul 2023 – May 2024
LSCM R&D Centre — *Cyberport, Hong Kong*

- Developed foundational Python web scrapers from scratch, extracting structured data from 10,000+ webpages to seed the project's first dataset.
- Engineered **data analysis pipelines** for over 40,000 JSON-formatted textual tokens.
- Prepared and pre-processed high-quality datasets for training **large language models**, ensuring data integrity.
- Experimented with **BERT**, **ELMo**, and other open source models to find optimal for tokenisation.
- Boosted model accuracy by selectively implementing dimensionality reduction and clustering algorithms.
- Optimised database search speeds by 200% by deploying **Milvus on Kubernetes** for efficient data management.
- Authored **technical documentation** on containerisation practices to enhance team knowledge transfer.

Skills

Developer Tools: Linux, Windows, MacOS, Git/GitHub/GitLab, Docker, Kubernetes, Jira/Lark, MS365
Programming Languages: Python, Bash, SQL, C/C++, Java, HTML5, CSS3, JS
Frameworks: CUDA, NumPy, scikit-learn, JUnit5, Qt, React.js

Projects

Algorithmic Trading Bot | *Python, C++, Backtesting, Quantitative Strategy* — Aug 2025 – Present

- Developing a **backtesting engine** in Python to evaluate momentum strategies on crypto data.
- Implementing execution modeling (slippage, commissions) to improve backtest realism.
- Rewriting critical path logic in C++ to **reduce latency** in live trading integration.

Final Year Project | *Python, Optimisation, Machine Learning, Research, NLP, React.js* — Oct 2024 – Jul 2025

- Authored a **computational study** on 1,500+ Instagram Reels, identifying drivers of compulsive scrolling.
- Cut scraping runtime 5x via **parallel processing** in Selenium, collecting 100K+ comments.
- Designed a Flask **API** to serve **real-time** sentiment analysis (VADER) to a custom Chrome Extension, which reduced mindless scrolling by 42% in **user testing**.
- Key findings on sentiment-engagement disparities were presented in a published academic paper.

Read The Vision | *Project Management, Accessibility, Innovation, Development Life Cycle* — Dec 2024 – Present

- Co-founded and led technical development for a **startup** developing AI glasses that translate sign language into real-time audio output.
- Showcased the product at **industry events**, generating significant interest from top-tier venture capitalists.
- Led my team to earn the **Merit Award** in the category of Trusted AI & Data Science at HK Techathon+ 2025.
- Approved for HKSTP **Ideation** Incubation Programme, with a starting fund of 10,000 HKD.

Physics Engine | *Java, Unit/Integration/System Testing, Design Patterns* — Aug 2023 – Dec 2023

- Engineered a physics simulation tool adopted by 10 pupils, aimed at simplifying complex concepts for students.
- Spearheaded the implementation of test automation within an **incremental delivery model**.
- Maximised scalability and readability of software system using system design principles.
- Crafted detailed **use case scenarios** based on user requirements to ensure alignment with educational goals.