

HAYDEN LEUNG

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EDUCATION

Columbia University, School of Engineering and Applied Science

New York, NY

B.S. Computer Science; Minors in Biomedical Engineering and Linguistics

Sep 2024 – May 2028 (expected)

GPA **3.858/4.00** · Dean's List every semester.

Coursework: Data Structures, Advanced Programming, Discrete Math, Artificial Intelligence, Computer Systems, Databases, Natural Language Processing, Computational Genomics.

EXPERIENCE

Capstone Capital Management

Hong Kong (hybrid)

AI Automation Engineer, Intern

Jul – Aug 2026

- Designed an **egress-locked security model** (block-all-network plus a tight allowlist) so a desktop AI assistant reads confidential hedge-fund position files with no path to exfiltrate them; built and verified end-to-end on a test machine.
- Authored ~20 task automations and two production Python reporting pipelines (pandas, openpyxl/python-docx) that replaced the desk's manual weekly reporting.
- Built a survivorship-bias-free S&P 500 drawdown research pipeline using point-in-time index membership (7 re-runnable stages).

Saint Bella Group (HKEX 2508)

Remote

Software Engineer, Intern

May – Aug 2026

- Built investor-relations data tooling: a fact-ID knowledge base (~379 IDs) with a build-failing validation gate blocking duplicate or unverified content.
- Deployed a president-briefing dashboard on **Cloudflare Workers** (TypeScript): context-grounded streaming Q&A with citation verification, strict CSP, fail-closed auth, English/Chinese i18n; plus a PPTX investor-deck exporter.

Columbia University

New York, NY

Teaching Assistant, ENGI 1006 (Intro to Computing)

Jan – May 2026

- Mentored ~220 students in Python scientific computing (NumPy, Pandas, Matplotlib, Scikit-learn) through weekly office hours and rigorous grading.

Centre for Novostics

Hong Kong

Junior Research Assistant

Jun – Aug 2025

- Applied LLMs to genomic data for early cancer detection; evaluated DNA-sequencing technologies for liquid biopsy (wet-lab).

FundamentalVR

London, UK

Summer Intern

Jul 2024

- Built real-time robotic-arm haptic feedback for needle-puncture surgical simulations in C#/Unity (OOP).

ASTRI

Hong Kong

Summer Intern

Jun – Aug 2023

- Selected from 3,000+ applicants (90 interns, sole high-schooler); automated end-to-end testing of a commercial 5G stack in shell (5G core + gNB on ARM/x86), eliminating manual test runs; elected 1 of 4 Division Leaders.

PUBLICATIONS

- MINA: linear probes reveal coding-sequence family signal in frozen DNA encoders.** Wijaya & Leung (2nd author), Columbia. Accepted to **MLCB 2026 for a spotlight presentation** (PMLR proceedings); also accepted to **iscbAI 2026** (oral presentation).
- Large-Scale Analysis of Wikipedia's Link Structure.** IEEE IRI 2023, Seattle. Co-led a team of 5; first k-core visualization over all of Wikipedia. DOI: 10.1109/IRI58017.2023.00051.

PROJECTS

- SOURCED** — shipped a public, pipx-installable Claude Code framework and CLI for defensible academic writing: verified full-text-only citations, scope-faithful paraphrase, and authorial-voice preservation across a multi-agent pipeline (5 subagents, 12 modes); 5 citation styles × 4 paste targets via pandoc/CSL. MIT, source-available.
- CAPELLA** — Co-founder & Founding Engineer (1 of 7) of a pre-launch fintech; sole author of the production web app on Cloudflare Workers (TypeScript) — Cloudflare Access, rate limiting, strict CSP — plus a retrieval-grounded org agent over its corpus.
- RSNA 2026 Knee Abnormality Detection (Kaggle)** — built the vision lane of a 2-person entry: a DINOv2-small + per-target SlotHead knee-MRI model, trained offline on cloud GPU and packaged into an inference-only kernel (PyTorch, AMP, TTA).

SKILLS

Languages: Python, Julia, C, C#, Java, SQL, TypeScript, Go, Shell, TeX.

ML & Tools: NumPy, Pandas, Matplotlib, Scikit-learn, PyTorch; Git, Linux, Unity.

Spoken: English & Cantonese (bilingual), Mandarin (working).

AWARDS

British Mathematical Olympiad — Distinction (Top 250) · UK Chemistry Olympiad — Gold · A-Levels 4×A* · ResearcherX — 2nd at Lion's Cage & Top 6 Millard Chan (only all-undergraduate finalist team) · FIRST Tech Challenge — Winning Alliance.