Caleb Kha-Uong

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Education

Princeton University Princeton, NJ

Bachelor of Engineering in Computer Science; Minors in Statistics & ML *Aug. 2024 – May 2028*

Relevant Coursework: Data Structures & Algorithms, Machine Learning, Programming Systems, Vector Calculus, Linear Algebra with Applications

Experience

COS 226 Undergraduate Course Assistant Sep. 2025 – Present

Princeton University *Princeton, NJ*

- Supported **200+** students in Data Structures & Algorithms via grading and targeted feedback; reinforced analysis of graphs, Union–Find, and balanced trees.

Machine Learning/Computer Vision Researcher Sep. 2025 – Present

Princeton Vision & Learning Lab (PI: Prof. Jia Deng) *Princeton, NJ*

- Designing an **intrinsics-aware video benchmark** to evaluate detector/tracker robustness as lens settings vary (focal length, focus, aperture, distortion).
- Developing a **real + synthetic** evaluation loop to sweep optics and prototype training strategies that **recover accuracy** under distribution shift.

Machine Learning Engineer May 2025 – Sep. 2025

Remora Capital *Lexington, VA*

- Forecasted 2-week returns for **S&P 400 MidCap** equities; ranked movers using market + news signals.
- Built a hurricane–impact pipeline for natural gas with **78.6%** post-landfall directional accuracy and ∼**50%** lower post-landfall error.

Founding Engineer Apr. 2025 – Present

MyChance.ai *Princeton, NJ*

- Launched a college admissions platform (matching, chance-me, essay review, application tracking) with **3,000+** sign-ups.
- Implemented a matchmaking engine that pairs students with schools using weighted signals (interests, stats, deadlines).
- Built a data driven chance-me model that uses school baselines and additive scoring, calibrated to past outcomes—**reducing overestimated probabilities by 20%**.

AI Researcher Sep. 2024 – Present

Princeton University Intelligent Performance & Adaptation Lab *Princeton, NJ*

- Led **1k+** trials on **20k** facts; showed **blocked** curricula cut hallucinations by ∼**25%** vs. interleaved.
- Orchestrated **32** prompt variants across **10** models (∼**47k** runs); simple, structured answers decreasing hallucinations by **3–4%** and increasing precision by ∼**3%**.
- Designed and executed a VLM Loftus–Palmer study: curated crash-video clips; **randomized** verb framing ("smashed"/"collided"); collected speed estimates and glass judgments; **counterbalanced** prompts/seeds; **analyzed** framing-induced shifts and false-positive rates.

Projects

Distill | *Python, PyMuPDF, Transformers, BM25, Rank Fusion/MMR* Aug. 2025 – Present

- Context compression for long docs: up to **98%** reduction (**10k+** tokens/query) while preserving cite-back accuracy.
- Filtered **500+** candidate chunks to ∼**250** high-value segments (∼50%), cutting processing cost nearly in half.

HoagieMeal | *Next.js, Supabase, Vercel* Sep. 2025 – Present

- Campus nutrition app (meal logging, accurate dining hall macros) for Princeton students

Technical Skills

Languages: Python, Java, JavaScript/TypeScript, C
Libraries/Frameworks: PyTorch, Transformers, NumPy, pandas, scikit-learn, React/Next.js, Tailwind
Data/Cloud: PostgreSQL/SQL, Supabase, Firebase, HuggingFace, Docker, Git, Vercel