

Henry Yan

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EDUCATION

Cornell Tech, Cornell University

New York, NY

MS in Applied Information Science & Information Systems

May 2027

Relevant Coursework: Algorithms and Data Structures for Applications, Applied Machine Learning

Honors/Awards: Jacobs CM Fellowship (Merit Scholarship)

The Chinese University of Hong Kong

Hong Kong SAR

BS in Computer Science

July 2025

Relevant Coursework: Fundamentals of AI, Software Engineering, Advanced Data Science for System Engineering

Honors/Awards: First Class Honors, ELITE Stream, Dean's List (**Top 10%**)

Exchange Programs: École Polytechnique Fédérale de Lausanne (2023-24); Peking University (2022-23)

TECHNICAL SKILLS

Programming: Python, SQL, MATLAB, C/C++, JavaScript, Java

ML & DS: Deep Learning, PyTorch, TensorFlow, Pandas, NumPy, Scikit-Learn, Spark

Software Dev: Object-Oriented Programming, Flask, REST APIs, Vue.js, React, Shell Scripting, CI/CD

Tools: Conda, Docker, Git, LaTeX, Linux, Vim

PROFESSIONAL EXPERIENCE

AiMall Technology Co., Ltd., *Machine Learning Engineer Intern*, Shenzhen, China

June 2024 - Aug 2024

- Engineered a **multimodal pipeline** with object detection, DeepSORT tracking, and vision-language models for retrieval.
- Achieved **95%+ retrieval accuracy** on people, objects, and events using integrated vision-language techniques.
- Patented an **embedding-based storage method** in SQLite, reducing large-scale video search time from hours to minutes.
- Developed an end-to-end real-time surveillance platform with RPA, **reducing 90% workload** for manual monitoring.
- Optimized proprietary LLMs with LoRA **fine-tuning and quantization**, boosting efficiency by 60% for deployment.

AIJobTech, Ltd., *Co-founder & CTO*, Hong Kong SAR

Mar 2024- July 2025

- Co-founded a startup** for AI-driven job hunting, securing funding and partnerships through competitions and outreach.
- Designed and implemented the **core platform** with Flask, Vue, and MySQL, ensuring scalable and efficient workflows.
- Developed LangChain-based **AI agents and scoring metrics** that improved user resume scores by up to 1.5×.
- Engineered **CV-job matching algorithms** using LLMs and collaborative filtering, reducing manual search time by 50%.
- Led cross-functional teams** and managed B2B integrations, delivering seamless products for users and partners.

PROJECTS

Can AI Agent Fit in Human Society? (Python)

Apr 2024 - July 2025

Capstone project supervised by Prof. Michael R. Lyu (CUHK) & Dr. Jen-tse Huang (JHU)

- Designed quantitative metrics** to assess factual accuracy, fairness, and real-time search reliability.
- Developed an **open-source fairness benchmark** integrating 19 social statistics and 3 cognitive bias measures.
- Evaluated 6 LLMs and 4 T2I models, uncovering systematic fairness gaps and **over-balancing issues**.
- Assessed 4 LLMs on web-based tasks across 15 countries, exposing frequent **inaccuracies in real-time search**.
- Uncovered gender and racial **bias in generative outputs**, guiding improvements toward more equitable AI design.

PUBLICATIONS & PATENTS

- Jen-tse Huang, **Yuhang Yan**, Linqi Liu, Yixin Wan, Wenxuan Wang, Kai-Wei Chang, Michael R. Lyu. “**Where Fact Ends and Fairness Begins: Redefining AI Bias Evaluation through Cognitive Biases.**” *Findings of the Association for Computational Linguistics: EMNLP 2025*. [10.48550/arXiv.2502.05849](https://arxiv.org/abs/2502.05849)
- Heng Yang, Yongjie Wu, Tao Long, **Yuhang Yan**. “**A natural language interactive retrieval intelligent security system based on large model.**” [CNI18939831A](https://arxiv.org/abs/2408.18939), 2024, China.