

# 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)

## PROFESSIONAL EXPERIENCE

### AiMall Technology Co., Ltd., *Machine Learning Engineer*, 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 and Selenium, reducing 90% of manual operation time
- Reduced deployment costs by 40% through LoRA fine-tuning and quantization of proprietary LLMs

### 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*. [10.18653/v1/2025.findings-emnlp.583](https://arxiv.org/abs/10.18653/v1/2025.findings-emnlp.583)
- Heng Yang, Yongjie Wu, Tao Long, **Yuhang Yan**. “*A natural language interactive retrieval intelligent security system based on large model.*” [CN118939831A](https://arxiv.org/abs/2408.11893), 2024, China.

## 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