An Cao

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EDUCATION

University of Toronto (UofT) **Sep 2024 – Dec 2025**
Master of Science in Applied Computing (AI concentration) - GPA: 3.90/4.0 *Toronto, Canada*

- *Vector Scholarship in Artificial Intelligence*

Huazhong University of Science and Technology (HUST) **Sep 2020 – Jun 2024**
Bachelor of Engineering in Software Engineering (AI track) - GPA: 3.96/4.0 *Wuhan, China*

- *Excellent Undergraduate Graduates, Merit Students, Outstanding Undergraduates in Academic Performance*
- *Authored a conference paper and a SCI Q1 Journal paper in CV as the first author at HUST Deep Learning Lab*
- *Finished 3 CV projects at HUST Deep Learning Lab as a core researcher of model and algorithm design*

TECHNICAL SKILLS

- **Functional**: *Machine Learning, Deep Learning, Computer Vision, AI, NLP, LLM, FinTech*
- **Tools**: *Python, Pytorch, Langchain, Vector Database, AWS, RabbitMQ, Docker, FastAPI*

EXPERIENCE

Modiface **May 2025 – Present**
Role: Machine Learning Intern *Toronto, Canada*
Project: Adapting Vision Language Models to Execute Interactive and Explainable Beauty Tasks
Keypoints:

- Developed an interactive multimodal LLM for beauty/medical sector tasks, enabling user-tailored insights from selfies
- Integrated segmentation capabilities to enhance the multimodal LLM's beauty analysis with explainable concern masks
- Incorporated the multimodal LLM to predict concerns with accuracy comparable to professional experts
- Built a multimodal dataset with LLMs for model training based of diverse formats and topics

Vector Institute **July 2025 – Present**
Role: Technical Assistant *Toronto, Canada*

- Delivered comprehensive hands-on technical support to the development of Agentic AI projects
- Contributed to the system design process for LLM-driven product solutions.

Vector Institute **Sep 2024 – May 2025**
Role: Machine Learning Associate *Toronto, Canada*
Project: DiligenceGPT
Keypoints:

- Created a multimodal data ingestion system to organize information from 1000 unstructured data sources
- Built an AI due diligence system that offers consistent quantitative evaluations and in-depth analysis
- Developed a RAG-based chatbot for instant Q&A with sourced answers from a vector database
- Implemented an AI agent to provide minute-level real-time business insights from dynamic data sources
- Facilitated large-scale and asynchronous AI services to smooth demand peaks

Project: Conversational Audience Builder for Synthetic Society
Keypoints:

- Developed a dynamic vector search system with query decomposition, boosting attribute retrieval recall to 89%
- Built a Reranking&Validation module to enhance LLM output consistency and stability
- Created a conversational agent for interactive customer profile building in the synthetic society of 60,000 attributes.
- Prototyped a streaming backend on GCP to support real-time interaction between LLM outputs and users

PUBLICATIONS

Diff-STAR (Accepted by IMAVIS, SCI Q1) **Sep 2023 – Aug 2024**

A. Cao and G. Shen, "Diff-STAR: Exploring student-teacher adaptive reconstruction through diffusion-based generation for image harmonization," Image Vis. Comput., vol. 151, p. 105254, Nov. 2024, doi: 10.1016/j.imavis.2024.105254.

LisaCLIP (Accepted by IJCNN as ORAL) **Sep 2022 – Feb 2023**

A. Cao, Y. Zhou, and G. Shen, "LisaCLIP: Locally Incremental Semantics Adaptation towards Zero-shot Text-driven Image Synthesis," in 2023 International Joint Conference on Neural Networks (IJCNN), Jun. 2023, pp. 1–10. doi: 10.1109/IJCNN54540.2023.10191516.