

CHEN Muyang

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Multimodal large language models · Multimodal reasoning · Affective computing

Education

The Chinese University of Hong Kong, Shenzhen

Sep 2023 – Jun 2027 (expected)

B.Eng. in Electrical and Computer Engineering (Computer Engineering Stream)

Cumulative GPA: **3.81/4.00** · Major GPA: **3.90/4.00 (3/60, Top 5%, Computer Engineering stream)**

Selected coursework (all A): Machine Learning; Machine Intelligence and Applications; Image Processing and Computer Vision; Parallel Programming

Research Experience

MISID – Multimodal Hidden-Intent Recognition

Sep 2025 – Present

Undergraduate Researcher, NAIS Lab, CUHK-Shenzhen | **Co-first author** | Under review at AAAI 2027

Lab PI: Prof. Fangxin Wang | Research mentor: Dr. Dayou Zhang

- Co-developed a two-tier annotation scheme linking affective states with long-range factual evidence for 3,962 aligned audiovisual utterance segments; independently assessed inter-annotator agreement (Krippendorff's α : 0.80–0.94 across structured fields).
- Designed FRACTAM's **modal decoupling and text reconstruction** for annotation and inference, pairing audio with eGeMAPS features and sampled video frames with FACS descriptors. Generated modality-specific descriptions without additional speech transcripts to limit textual interference and support subsequent cross-modal inconsistency analysis.
- Contributed to the zero-shot evaluation of 19 language and video-language models, conducted ablation studies, and co-designed the LLM-as-a-Judge protocol.
- Co-designed FRACTAM, integrating modality decoupling, long-range retrieval, and cross-modal evidence chains; the full framework improved mean Hidden Intent Inference Score from **34.22 to 42.79** across ten language-model backbones.

AffectiveArt – Artwork Emotion Understanding

May – Jun 2026

Team Lead | ACM Multimedia 2026 Grand Challenge, Track 2

- Designed the pipeline and independently fine-tuned SigLIP2 and DINOv3 for visual-attribute salience; salience and classification outputs conditioned LoRA-tuned Qwen3.5-27B for artwork emotion descriptions.
- Fine-tuned Gemma, Qwen, SigLIP2, and DINOv3 classifiers on the official EmoArt training split; **designed and implemented validation-weighted voting**, outperforming the best individual model.
- Led a three-member team, placing **5th among 14 teams** in the challenge track. The system achieved 94.0% arousal, 88.3% valence, and 79.2% emotion accuracy on the hidden test set.

Interpretable Butterfly Classification [Code](#)

Summer 2025

Project Lead | ECE4513 Image Processing and Computer Vision, CUHK-Shenzhen

- Led a four-layer CNN project classifying ten visually similar butterfly species; achieved **83.23% test accuracy**.
- Implemented Class Activation Mapping (CAM) from scratch and combined it with PCA of final-layer feature maps to examine which image regions supported predictions; documented the analysis in a technical report.

Teaching Experience

Undergraduate Student Teaching Fellow

Sep – Dec 2024

MAT1001 Calculus I, CUHK-Shenzhen

Supported weekly tutorials and office hours for approximately 60 students.

Honors & Awards

Dean's List, School of Science and Engineering, CUHK-Shenzhen

2023–24, 2024–25, 2025–26

Academic Specialty Entrance Scholarship (Second Class)

2023 (renewable)

Skills & Languages

Programming: Python, C++ | **Machine Learning:** PyTorch, OpenCV

Tools: Git, Linux, LaTeX

Languages: Mandarin (native); English (IELTS Academic 7.0 overall)