

SHUNIAN CHEN

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EDUCATION

The Chinese University of Hong Kong, Shenzhen Ph.D. in Computer Science GPA: 3.68 Courses: Large Language Models, Machine Learning, Algorithm Analysis, Software Engineering, Natural Language Processing	Shenzhen, CN Aug 2024 - Now
Duke University Master of Engineering Management, Data Science and Machine Learning Track CGPA: 3.8/4.0, MGPA: 4.0/4.0 Courses: AI in Practice, Building Products Using Deep Learning, Probabilistic Machine Learning	Durham, NC Aug 2021 - May 2023
The Chinese University of Hong Kong, Shenzhen Bachelor of Engineering; Major in Computer Science and Engineering; Minor in Statistics CGPA:3.6/4.0, MGPA:3.6/4.0,top 15% Courses: Fundamentals of Machine Learning, Techniques for Data Mining, Time Series, Stochastic Process, Database System, Operating Systems, Computer Architecture, Data Structures, Optimization, Probability and Statistics	Shenzhen, CN Aug 2017 - May 2021

RESEARCH EXPERIENCE

The Chinese University of Hong Kong, Shenzhen (Advisor: Benyou Wang) Bridging the Knowledge Modality Gap for Large Vision-Language Model Co-first Author	Shenzhen, CN Under review
<ul style="list-style-type: none">Defined and quantified the “knowledge modality gap” in LVLMs with new metrics and a benchmark, enabling cross-model diagnostics of vision-to-knowledge failures; designed probing experiments to reveal underlying mechanisms.Curated a cross-modal, knowledge-intensive dataset via distillation using Wikipedia as reference; introduced a contrastive loss for stronger knowledge–modality alignment.Applied GRPO to enforce a “look-then-think” strategy that grounds on the image first and reasons second; full method (distillation + contrastive + GRPO) achieved ~30% overall gain on our benchmark.	Shenzhen, CN Under review
The Chinese University of Hong Kong, Shenzhen (Advisor: Benyou Wang) EVA: An Evidence-First Audio Understanding Paradigm for LALMs Co-first Author	Shenzhen, CN Under review

The Chinese University of Hong Kong, Shenzhen (Advisor: Benyou Wang) LongLLaVA: Scaling Multi-modal LLMs Efficiently via a Hybrid Architecture Second Author	Shenzhen, CN EMNLP 2025 Findings
<ul style="list-style-type: none">Developed a hybrid MLLM (LongLLaVA) combining Mamba efficiency with Transformer accuracy, improving multi-image performance while reducing GPU memory usage by > 80%.Optimized spatial–temporal data pipelines and progressive training to let a single A100 process 1000+ images—~5× typical long-context vision baselines.	Shenzhen, CN EMNLP 2025 Findings

- Ranked top-3 across 12 video/image benchmarks while sustaining \sim 220 tokens/sec throughput; enabled scalable use cases in medical imaging and autonomy.

The Chinese University of Hong Kong, Shenzhen (Advisor: Benyou Wang)

ALLaVA: Harnessing GPT4V-synthesized Data for A Lite Vision-Language Model

Second Author

Shenzhen, CN

Under review

- Designed a “caption-first, then Q&A” distillation pipeline to improve synthesized data quality; open-sourced ALLaVA, then the largest synthetic multimodal dataset.
- Trained 3B-scale models on ALLaVA that matched or surpassed larger baselines.

The Chinese University of Hong Kong, Shenzhen (Advisor: Benyou Wang)

MLLM-Bench: Evaluating Multimodal LLMs with Per-sample Criteria

Co-first Author

Shenzhen, CN

NAACL 2025

- Proposed a capability taxonomy with six cognitive levels; released a high-quality VQA benchmark for the community.
- Evaluated 12 leading vision-language models under four settings; among the first to use GPT-4V as an automatic evaluator.

The Chinese University of Hong Kong, Shenzhen (Advisor: Benyou Wang)

MileBench: Benchmarking MLLMs in Long Context

Second Author

Shenzhen, CN

COLM2024

- Built a benchmark for multi-image capabilities of MLLMs, systematically measuring temporal and spatial understanding across multi-image tasks.
- Benchmarked open/closed-source models and identified key failure modes, informing future model design.

The Chinese University of Hong Kong, Shenzhen (Advisor: Benyou Wang)

Humans or LLMs as the Judge? A Study on Judgement Bias

Co-first Author

Shenzhen, CN

EMNLP 2024

- Proposed an innovative metric to measure the evaluators’ performance without ground truth; indicated the different **potential biases** of using humans and LLMs as judges.
- Validated the observed bias through manipulating the model, causing erroneous judgments by the models.

PROJECT EXPERIENCE

2023 Microsoft Imagine Cup

Autonomous Data Science Platform

Durham, NC

Jan 2023 - Mar 2023

- Won the **5th** position out of 16 teams in the Americas World Finals, **2nd** position in Education Track.
- Designed and implemented a no-code platform using Python for data cleaning and ML model building.
- Incorporated Open AI APIs to allow users to control the tools in the platform with **natural language** and voice commands.

TECHNICAL SKILLS

- Python (Numpy, Pandas, sklearn, Pytorch, Transformers, Accelerate), R, SQL, C/C++, MATLAB, Java, Linux
- Docker, AWS (Code Pipeline, ECS, etc.), Azure (Compute Engine, Container Registry, Databricks, etc.), GCP
- Jupyter, Markdown, L^AT_EX, MS Office (Word, PowerPoint, Excel, Project, Visio)

HONORS AND AWARDS

- 5th position in the Americas World Finals & 2nd position in Education Category, Microsoft Imagine Cup, 2023
- Bo Wen Scholarship, The Chinese University of Hong Kong, Shenzhen, for 4 consecutive years, 2017-2021
- Dean’s List Award, The Chinese University of Hong Kong, Shenzhen, for 4 consecutive years, 2017-2021