XINGTONG GE

1-st year Ph.D. student at HKUST

xingtongge.github.io · Google Scholar · GitHub · xingtong.ge@gmail.com · Birth: 2001.09

RESEARCH INTEREST

Generative AI: Real-time Long Video Generation diffusion distillation, long-horizon temporal coherence
Generative AI: RL for Generative Models RLHF for diffusion/flow, semantic guidance, preference optimization
Representation & Compression: neural image/video compression, Gaussian splatting, task-aware coding for machine vision

EDUCATION

Hong Kong University of Science and Technology (HKUST) *Aug 2025 – Present*
Ph.D. in Electronic & Computer Engineering
Advisor: Prof. Jun Zhang (IEEE Fellow)

Beijing Institute of Technology (BIT) *Sep 2022 – Jun 2024*
M.S. in Software Engineering

Beijing Institute of Technology (BIT) *Sep 2018 – Jun 2022*
B.S. in Computer Science & Technology *Rank: Top 10%*
Outstanding Graduation Thesis Award *Top 5%*

EXPERIENCE

Vivix AI Aug 2025 – Present
Research Intern *Shenzhen/Hong Kong, China*

- Research on efficient video generation, focusing on distillation-based acceleration for video diffusion/flow models and real-time/long-horizon generation.
- Distillation + RLHF for generative video models: preference optimization, reward design, and alignment for deterministic ODE sampling.

SenseTime Research Jul 2024 – Aug 2025
Algorithm Researcher, Base Model Group *Beijing, China*

- Led research and engineering for fast text-to-image generation, covering Stable Diffusion/SDXL, large flow-based teachers (e.g., SD3.5/FLUX-like), and product distilled models in the *Miaohua* family.
- Proposed and scaled distillation pipelines (e.g., distribution matching + adversarial components) to achieve multi-step generation with strong quality/speed trade-offs; shipped techniques into internal production iterations.
- Built post-training optimization prototypes (e.g., GRPO-style preference optimization) for generative models; improved alignment/quality under limited-step sampling.

SenseTime Research Feb 2024 – Jul 2024
Research Intern, Base Model Group *Beijing, China*

- Worked on fast controllable generation and model acceleration for SDXL-like pipelines (e.g., consistency/LCM-style acceleration, outpainting).
- Improved robustness for face/portrait related generation modules in product pipelines and resolved failure cases for deployment.

SenseTime Research May 2023 – Jan 2024
Research Intern, ISP & Codec Group *Beijing, China*

- Research on neural image/video representation and compression, including task-aware coding for machine vision and Gaussian splatting based compression.
- Contributed to publications at CVPR/ECCV and a journal paper at IEEE TCSVT.

PUBLICATIONS & PREPRINTS

Salt: Self-Consistent Distribution Matching with Cache-Aware Training for Fast Video Generation

Xingtong Ge, Yi Zhang, Yushi Huang, Dailan He, Xiahong Wang, Bingqi Ma, Guanglu Song, Yu Liu, Jun Zhang.
Preprint 2026. [Paper] [Code]

SenseFlow: Scaling Distribution Matching for Flow-based Text-to-Image Distillation

Xingtong Ge, Xin Zhang, Tongda Xu, Yi Zhang, Xinjie Zhang, Yan Wang, Jun Zhang.
ICLR 2026. [Paper] [Code]

Neighbor GRPO: Contrastive ODE Policy Optimization Aligns Flow Models

Dailan He, Guanlin Feng, **Xingtong Ge**, Yazhe Niu, Yi Zhang, Bingqi Ma, Guanglu Song, Yu Liu, Hongsheng Li.
CVPR 2026. [Paper]

LinVideo: A Post-Training Framework towards $\mathcal{O}(n)$ Attention in Efficient Video Generation

Yushi Huang, **Xingtong Ge**, Ruihao Gong, Chengtao Lv, Jun Zhang.
CVPR 2026. [Paper]

GaussianImage: 1000 FPS Image Representation and Compression by 2D Gaussian Splatting

Xinjie Zhang*, **Xingtong Ge***, Tongda Xu, Dailan He, Yan Wang, Hongwei Qin, Guo Lu, Jing Geng, Jun Zhang. (*Equal contribution)
ECCV 2024. [Paper] [Code] [Project Page]

Task-Aware Encoder Control for Deep Video Compression

Xingtong Ge, Jixiang Luo, Xinjie Zhang, Tongda Xu, Guo Lu, Dailan He, Jing Geng, Yan Wang, Jun Zhang, Hongwei Qin.
CVPR 2024. [Paper]

Boosting Neural Representations for Videos with a Conditional Decoder

Xinjie Zhang, Ren Yang, Dailan He, **Xingtong Ge**, Tongda Xu, Yan Wang, Hongwei Qin, Jun Zhang.
CVPR 2024. [Paper] [Code]

Preprocessing Enhanced Image Compression for Machine Vision

Guo Lu, **Xingtong Ge**, Tianxiong Zhong, Qiang Hu, Jing Geng.
IEEE TCSVT 2024 (arXiv 2022). [Paper] [Code]

SELECTED PROJECTS (RESEARCH & PRODUCT)

On-device Text-to-Image for AIPC (B2B Delivery) Feb 2025 – Aug 2025
SenseTime Research

- Co-developed an on-device T2I system for AIPC scenarios; trained an in-house fast model enabling real-time high-quality generation (<0.8s).

- Delivered controllable generation modules on-device: ControlNet variants conditioned on hand-drawn sketches, depth maps, and other control signals.

Anime-style Text-to-Image Acceleration & LoRA Customization Dec 2024 – Jul 2025
SenseTime Research

- Built an anime T2I acceleration pipeline on top of "Miaohua 1.0" using segment-wise distillation combined with adversarial training; achieved ~7× speedup with comparable quality to the base model.
- Trained and delivered multiple style LoRAs (client-specific) based on the SenseFlow framework; improved both generation speed and style fidelity over baseline and open-source methods.

Low-light Image Enhancement (Team Lead) Oct 2022 – Dec 2022
Beijing Institute of Technology

- Reproduced a no-reference low-light enhancement method and proposed a color-enhancement improvement; achieved consistent PSNR/SSIM gains across multiple benchmarks.

NAIC "Huawei Ascend Cup" AI+ Visual Feature Coding Challenge (Team Lead) Dec 2021 – Mar 2022
National AI Competition

- Proposed joint optimization of image compression and re-identification (pedestrian/vehicle): feature extraction, feature compression/reconstruction, and ReID evaluation in a unified pipeline.
- Ranked Top 30 among 1924 teams.

HONORS & AWARDS

HKUST PGS Scholarship	2025
BIT Graduate Special Scholarship (twice)	2022, 2023
Outstanding Undergraduate Thesis Award (Top 5%)	2022
NAIC "Huawei Ascend Cup" AI+ Visual Feature Coding Competition (Top 2%)	2021–2022
iGEM International Silver Award	2020

TECHNICAL SKILLS

Programming	Python, C/C++, CUDA
ML/DL	PyTorch, distributed training (DDP), mixed precision, profiling & optimization
GenAI	diffusion/flow models, distillation, controllable generation, preference optimization
Compression	neural image/video compression, Gaussian splatting representation
Tools	Git, Linux, Slurm/HPC, LaTeX