

# XINGTONG GE

1-st year Ph.D. student at HKUST

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## RESEARCH INTEREST

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**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

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**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

Outstanding Graduation Thesis Award

*Rank: Top 10%*

*Top 5%*

## EXPERIENCE

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**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

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### 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)

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### **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  $\sim 7\times$  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**

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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**

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