Yanzuo Lu

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RESEARCH

My current research focuses on building **Real-Time and Long-Video World Models**, involving three main areas: **(1) real-time generation,** with a focus on achieving inference speeds where the processing time for each video chunk is less than its duration; **(2) long-video generation,** with the key challenge being the mitigation of error accumulation between chunks to maintain long-term consistency; **(3) interactive world model,** with the objective of developing methods for effective control signal injection and responsive, timely feedback.

EXPERIENCE

PhD Student, Imperial College London

Oct 2025 - Present, London, United Kingdom
In Department of Computing, Supervised by Jiankang Deng;
Research Topic: real-time and long-video world models;
Fully-Funded Doctoral Scholarship Award (2025-2029)

Research Intern, ByteDance Seed

Dec 2023 - Sep 2025 (1 yr 10 mo), Shenzhen, China
Mentored by Yuxi Ren & Jie Wu and led by Xuefeng Xiao;
Research Topic: accelerating diffusion model to reduce sampling steps via progressive/consistency/rectified/score/adversarial distillation and RLHF for efficient image and video synthesis;
Industry Deployment: Douyin/TikTok (short-form content), Capcut (video editor), Dreamina (image & video generator), Doubao (chatbot)

Master of Engineering (MEng), Sun Yat-Sen University

Sep 2022 - Jun 2025, Guangzhou, China
In School of Computer Science and Engineering;
Supervised by Andy J Ma, Xiaohua Xie and Jianhuang Lai;
Research Topic: customized diffusion models, domain adaptation and person re-identification;
China National Scholarship (2024)

Bachelor of Engineering (BEng), Sun Yat-Sen University

Sep 2018 - Jun 2022, Guangzhou, China
In School of Computer Science and Engineering;
Relevant Coursework: Probability and Statistics, Machine Learning and Data Mining, Principles of Artificial Neural Networks, Optimization Theory, Artificial Intelligence, Computer Vision, Computer Graphics, etc. (Average Score: 91.18 / 100)

SELECTED PUBLICATIONS

- [**ICCV 2025 Highlight**] **Y Lu**, et al., Adversarial Distribution Matching for Diffusion Distillation Towards Efficient Image and Video Synthesis. [arXiv][Publication]

- [**CVPR 2024 Highlight**] **Y Lu**, et al., Coarse-to-Fine Latent Diffusion for Pose-Guided Person Image Synthesis. [arXiv][Publication][Code**(200+ stars on GitHub)**][Talk]

- [**NeurIPS 2024**] Y Ren, X Xia, **Y Lu**, et al., Hyper-SD: Trajectory Segmented Consistency Model for Efficient Image Synthesis. [arXiv][Publication][Project Page][HuggingFace**(Over 4M downloads)**][PR]

- **[ECCV 2024]** Y Ren, J Wu, **Y Lu**, et al., ByteEdit: Boost, Comply and Accelerate Generative Image Editing. [arXiv][Publication][Project Page]

Technical Reports

- **[arXiv:2509.20427]** ByteDance Seed **(Core Contributor)**, Seedream 4.0: Toward Next-generation Multimodal Image Generation. [arXiv][Project Page]
- **[arXiv:2509.18824]** **Y Lu**, et al., Hyper-Bagel: A Unified Acceleration Framework for Multimodal Understanding and Generation. [arXiv][Project Page]
- **[arXiv:2504.11346]** ByteDance Seed **(Contributor)**, Seedream 3.0 Technical Report. [arXiv][Project Page]

Professional Service

- Conference Reviewer: CVPR (2026), NeurIPS (2025), ACM MM (2024, 2025)
- Journal Reviewer: IEEE TPAMI, IEEE TIP, IEEE TVCG, IEEE TCSVT