YIHUA DU

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EDUCATION

Hong Kong University of Science and Technology, Guangzhou *Sep 2025 - Present*
M.Phil. student in Artificial Intelligence, advised by Prof. Ying-Cong CHEN.

Harbin Institute of Technology *Sep 2021 – Jul 2025*
B.S. in Computer Science, Rank: 16/117, GPA: 3.787/4, advised by Prof. Shaohui Liu.

EXPERIENCES

Hong Kong University of Science and Technology, Guangzhou *Mar 2025 – Aug 2025*
Research Assistant working on Controllable Video Generation

Meituan *Mar 2024 - Aug 2024*
Research Intern working on Face Anti-Spoofing

PROJECTS

StereoPilot: Learning Unified and Efficient Stereo Conversion via Generative Priors *Mar 2025 - Present*
Core Contributor

· **Efficient Stereo Video Generation:** Proposed StereoPilot, a feed-forward diffusion framework that directly synthesizes stereo views without explicit depth estimation, resolving ambiguity in reflective scenes. We constructed UniStereo, the first large-scale benchmark unifying parallel and converged formats, and designed a learnable domain switcher with cycle-consistency loss to adapt to diverse stereo geometries. This approach achieves state-of-the-art visual fidelity and significantly boosts efficiency, reducing inference latency to just 11 seconds.

VideoMemory: Toward Consistent Video Generation via Memory Integration *Sep 2025 - Present*
Core Contributor

· **Multi-shot Consistent Video Generation:** Proposed VideoMemory, an entity-centric framework for multi-shot consistent video generation. It reframes long-range consistency as entity asset management, introducing a read–write Dynamic Memory Bank and a multi-agent closed loop (retrieve → generate on miss → write back) to enable cross-shot entity reuse and reduce identity drift under story-driven control. Built a 54-case multi-shot consistency benchmark spanning characters, props, and backgrounds; experiments show improved consistency and overall visual quality.

LiveGuard: Face Anti-Spoofing via Tamper and Recompression Detection *Mar 2024 - Aug 2024*
Research Intern Meituan

· **Face Anti-Spoofing Defense:** Proposed a tamper- and recompression-aware liveness defense pipeline for face-verification security, optimizing detection algorithms under real-world production constraints. We modeled the problem with a hybrid approach combining handcrafted forensic features and multimodal feature fusion, achieving a 99.99% interception rate on in-house business data. To improve generalization and deployment robustness, we developed a custom data-collection app and an end-to-end data production and labeling pipeline aligned with the online environment, curating and converting 500K+ high-quality samples for stable operation in practice. We further integrated an Image Quality Factor (QF) module to supply interpretable cues and support lightweight deployment.

PUBLICATIONS

[*] denotes equal contribution.

[1] **StereoPilot: Learning Unified and Efficient Stereo Conversion via Generative Prior** *CVPR 2026 (Under Review)*
Guibao Shen[*], **Yihua Du**[*], Wenhang Ge[*], Jing He, Chirui Chang, Donghao Zhou, Zhen Yang, Luozhou Wang, Xin Tao, Ying-Cong Chen.

[2] **VideoMemory: Toward Consistent Video Generation via Memory Integration** *CVPR 2026 (Under Review)*
Jinsong Zhou[*], **Yihua Du**[*], Xinli Xu[*], Luozhou Wang, Zijie Zhuang, Yehang Zhang, Shuaibo Li, Xiaojun Hu, Bolan Su, Ying-Cong Chen.

TECHNICAL STRENGTHS

Programming Languages	Python, Java, C++, Matlab
Deep Learning Framework	Pytorch, Tensorflow

HONORS & AWARDS

National Prize, National College Students' Innovation and Entrepreneurship Program	*Sep 2024*
National Second Prize, The 6th Global Campus Artificial Intelligence Algorithm Elite Competition	*Nov 2024*
Outstanding Innovative Integrated Design Award — Harbin Institute of Technology (HIT) Undergraduate Thesis (Final-Year Project)	*May 2025*
Top 20 (Northeast China Regional Division) — The 17th National College Students' Software Innovation Competition	*Mar 2024*
Harbin Institute of Technology Outstanding Student Award	*2022, 2023*
Renmin Scholarship (Harbin Institute of Technology)	*2022*