
PAPER LIST

March 13: Autoregressive Models

Visual Autoregressive Modeling: Scalable Image Generation via Next-Scale Prediction

Keyu Tian, Yi Jiang, Zehuan Yuan, Bingyue Peng, Liwei Wang. NeurIPS 2024.

<https://github.com/FoundationVision/VAR>

March 20: Normalizing Flow Models

JetFormer: An Autoregressive Generative Model of Raw Images and Text

Michael Tschannen, Andr Susano Pinto, Alexander Kolesnikov. ICLR 2025.

March 27: Latent Variable Models

High-Quality Joint Image and Video Tokenization with Causal VAE

Dawit Mureja Argaw, Xian Liu, Qinsheng Zhang, Joon Son Chung, Ming-Yu Liu, Fitsum Reda. ICLR 2025.

<https://github.com/dawitmureja/Joint-Image-and-Video-Tokenization-with-Causal-VAE>

April 3: *No Classes - Spring Break*

April 10: Generative Adversarial Networks I

The GAN is dead; long live the GAN! A Modern Baseline GAN

Nick Huang, Aaron Gokaslan, Volodymyr Kuleshov, James Tompkin. NeurIPS 2024.

<https://github.com/brownavc/R3GAN>

April 17: Generative Adversarial Networks II

E2GAN: Efficient Training of Efficient GANs for Image-to-Image Translation

Yifan Gong, Zheng Zhan, Qing Jin, Yanyu Li, Yerlan Idelbayev, Xian Liu, Andrey Zharkov, Kfir Aberman, Sergey Tulyakov, Yanzhi Wang, Jian Ren. ICML 2024.

<https://github.com/Yifanfanfanfan/Yifanfanfanfan.github.io/tree/main/e2gan>

April 24: Diffusion Models I

Ctrl-X: Controlling Structure and Appearance for Text-To-Image Generation Without Guidance

Kuan Heng Lin, Sicheng Mo, Ben Klingher, Fangzhou Mu, Bolei Zhou. NeurIPS 2024.

<https://github.com/genforce/ctrl-x>

May 29: Diffusion Models II

UltraPixel: Advancing Ultra-High-Resolution Image Synthesis to New Peaks

Jingjing Ren, Wenbo Li, Haoyu Chen, Renjing Pei, Bin Shao, Yong Guo, Long Peng, Fenglong Song, Lei Zhu. NeurIPS 2024.

<https://github.com/catcathh/ultrapixel>

May 1: *No Classes - May Day*

May 8: *Project Progress Presentations*

May 15: Strengths and Weaknesses of Current Generative Models

[Exposing flaws of generative model evaluation metrics and their unfair treatment of diffusion models](#)

George Stein, Jesse C. Cresswell, Rasa Hosseinzadeh, Yi Sui, Brendan Leigh Ross, Valentin Vilecroze, Zhaoyan Liu, Anthony L. Caterini, Eric Taylor, Gabriel Loaiza-Ganem. NeurIPS 2023.

<https://github.com/layer6ai-labs/dgm-eval>

May 22: Video Generation

[Autoregressive Video Generation without Vector Quantization](#)

Haoge Deng, Ting Pan, Haiwen Diao, Zhengxiong Luo, Yufeng Cui, Huchuan Lu, Shiguang Shan, Yonggang Qi, Xinlong Wang. ICLR 2025.

<https://github.com/baaivision/NOVA>

May 29: Self-Supervised Learning

[A Unifying Framework for Representation Learning](#)

Shaden Naif Alshammari, Mark Hamilton, Axel Feldmann, John R. Hershey, William T. Freeman. ICLR 2025.

<https://github.com/ShadeAlsha/I-Con>