

The Evolution and Future of Generative AI: From GANs to GPT-like Models in Computer Vision

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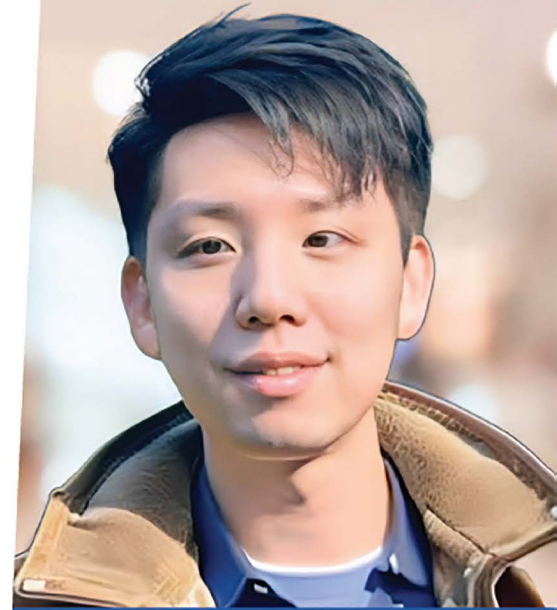
Seminar link: <https://cityu.zoom.us/j/92229436684>



ABSTRACT

Generative AI, a pioneering force in computer vision and natural language processing, holds significant importance. The landscape of models, data, and applications in this domain has undergone profound evolution over the years. In this seminar, we begin by describing our initial endeavors employing Generative Adversarial Networks (GANs) for high-resolution image inpainting tasks. Subsequently, we explore the novel use of GANs in the generation and detection of DeepFakes. Finally, we introduce our recent breakthroughs in the realm of text-to-video generation, called “make-a-video”, powered by advanced GPT-like models. Projecting into the future, we propose that the progression of large generative models will be heavily reliant on the availability of high-quality training data coupled with innovative model designs. Furthermore, we anticipate a shift towards open-source, personalized models becoming more mainstream. These advancements will play a critical role across a spectrum of applications, from fostering visual generation to catalyzing creative expression.

ONLINE SEMINAR



Dr Harry (Chao) YANG

GUEST SPEAKER'S PROFILE

Dr. Harry (Chao) YANG has been a Senior Research Scientist at Meta AI with a focus on computer vision and natural language processing. His research explores generative AI, including the theory and application of GANs, transformers and diffusion models. Recently, Dr. Yang has played a significant role in the development of large-scale GPT-like models that leverage billion-scale datasets for multimodal generation. During his tenure, Dr. Yang has published over 20 peer-reviewed papers and has delivered novel industry solutions. Dr. Yang received his PhD from the University of Southern California (USC) under Prof. C.-C. Jay Kuo in 2019, and is the recipient of USC Distinguished Alumni Award in 2023.