

Wilson Yan

[Google Scholar](#)

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My goal is to equip artificial intelligence (AI) with a deep understanding of the physical world. As such, my research focuses on designing scalable video models that generate long and complex video, thereby teaching them an understanding of 3D geometry, physics, and the physical properties of objects. Tackling this challenge, I have been fortunate to publish several papers in top venues, presenting novel video models and their applications to decision making agents.

Education

University of California, Berkeley

2020 – Now

PhD Computer Science

Advisor: *Pieter Abbeel*

GPA: 3.89 / 4.00

University of California, Berkeley

2016 – 2020

Bachelor of the Arts in Computer Science and Applied Math

GPA: 3.97 / 4.00

Employment

Google DeepMind, GenAI

05/2024 – Now

Senior Research Scientist

Working on large-scale world models for decision making.

Meta, GenAI

06/2023 – 10/2023

PhD Research Intern

Trained large-scale video generation models and implemented image/video editing methods.

Explored motion representations (optical flow, motion vectors) as model input and for data filtering.

Released a state-of-the-art algorithm for general video editing (see papers).

Perplexity AI

10/2022 – 03/2023

PhD Research Intern

Internship at a fast-growing AI startup.

Developed retrieval and reranking mechanisms to improve generation quality.

Implemented data filtering techniques to construct high-quality finetuning datasets.

Trained and deployed the first in-house LLM to replace OpenAI API inference.

Robot Learning Lab (BAIR)

01/2018 – 03/2020

Research Assistant

Conducted several research projects across reinforcement learning, robotics, and generative modeling.

Papers

World Model on Million-Length Video And Language With RingAttention H Liu, W Yan , M Zaharia, P Abbeel	Preprint
Motion-Conditioned Image Animation for Video Editing W Yan , A Brown, P Abbeel, R Girdhar, S Azadi	Preprint
Video Prediction Models as Rewards for Reinforcement Learning A Escontrela*, A Adeniji*, W Yan* , A Jain, XB Peng, K Goldberg Y Lee, D Hafner, P Abbeel	NeurIPS 2023
Language Quantized AutoEncoders: Towards Unsupervised Text-Image Alignment H Liu, W Yan , P Abbeel	NeurIPS 2023
Temporally Consistent Video Transformer for Long-Term Video Prediction W Yan , D Hafner, S James, P Abbeel	ICML 2023
Patch-based Object-centric Transformers for Efficient Video Generation W Yan , R Okumura, S James, P Abbeel	Preprint
VideoGPT: Video Generation Using VQ-VAE and Transformers W Yan* , Y Zhang*, P Abbeel, A Srinivas	Preprint
Learning Predictive Representations for Deformable Objects Using Contrastive Estimation W Yan , A Vangipuram, P Abbeel, L Pinto	CoRL 2020
Learning to Manipulate Deformable Objects without Demonstrations Y Wu*, W Yan* , T Kurutach, L Pinto, P Abbeel	RSS 2020

Software

Large World Model Link Open-source 1 million context-length multimodal foundation model.	6900 stars
VideoGPT Link Video Generation with VQ-VAE and Transformers.	600 stars
DeepUL Link Course homework and demos for Deep Unsupervised Learning.	600 stars

Teaching

Introduction to Artificial Intelligence CS 188 TA for Fall 2019 and Spring 2019. Head TA for Fall 2019 (Managing a course of over 400 students).	Fall 2018, Spring 2019, Fall 2019
Deep Unsupervised Learning CS 294-158 Co-Head TA for Spring 2020 and Lecturer for Spring 2024 over a graduate course with 100 PhD students.	Spring 2020, Spring 2024

Reviewing

Neural Information Processing Systems (NeurIPS)	2022, 2023
International Conference on Learning Representations (ICLR)	2023