Ce Zhang

EDUCATION

UNC-Chapel Hill

Chapel Hill, NC, US

Ph.D. student in Computer Science, GPA: 4.0 / 4.0

B.S. in Computer Science, GPA: 3.75 / 4.0, Rank: Top 10%

Aug. 2023 - Present

• Advisor: Prof. Gedas Bertasius

Brown University

Providence, RI, US

M.S. in Computer Science, GPA: 3.75 / 4.0

Aug. 2021 - May 2023

• Advisor: Prof. Chen Sun

Southeast University

Nanjing, Jiangsu, China

Aug. 2016 - Jun. 2020

RESEARCH INTEREST

I'm broadly interested in Computer Vision, Multimodal learning and Robotics. Currently, I'm mainly working on **video understanding**, with a focus on leveraging **foundation models** (LLMs, VLMs, etc.) to solve multiple video understanding tasks.

ACADEMIC EXPERIENCE

Research Assistant

Aug. 2023 – Present

UNC-Chapel Hill, Advisor: Prof. Gedas Bertasius

 $Chapel\ Hill,\ NC$

- Curated a large-scale video dataset for fine-grained basketball skill estimation with over 4000 hours and 32K basketball players. Benchmarked multiple state-of-the-art video models on the proposed dataset. (CVPR 2025)
- Proposed a framework for long-range videoQA by decomposing videoQA into short-term visual captioning and long-range language modeling. Achieved SOTA zero-shot videoQA performance on EgoSchema, NeXT-QA, IntentQA and NeXT-GQA. (EMNLP 2024) link

Research Assistant

Apr. 2022 – May 2023

Brown University, Advisor: Prof. Chen Sun

Providence, RI

- Represent the video with discretized action labels and utilized LLMs for reasoning. Achieved SOTA long-term action anticipation performance on Ego4D, EPIC-Kitchens-55 and EGTEA Gaze+. (ICLR 2024) <u>link</u>
- Extracted task-specific object-centric representations from pretrained models (e.g. GLIP). Utilized object-centric representations for long-term action anticipation. Achieved competitive results on Ego4D, 50Salads and EGTEA Gaze+. (WACV 2024) <u>link</u>
- Condensed expert trajectory demonstrations into useful representations for policy learning. Achieved competitive performance on AntMaze, FrankaKitchen and Locomotion. (NeurIPS 2023) <u>link</u>

Industry Experience

Research Scientist Intern

May 2024 – Dec. 2024

Meta FAIR, Mentor: Satwik Kottur

Menlo Park, CA

• Augmented long-horizon video-based planning ability of large VLMs. Designed multiple auxiliary tasks (e.g., goal prediction, state prediction) and trained the model on all tasks jointly. Leveraged Multi-token Prediction to model the structured action space. Achieved SOTA performance on COIN, CrossTask and Ego4D. (In Submission)

Machine Learning Engineer Intern

Mar. 2021 – July 2021

QCraft

Beijing, China

• Worked on 3D Multi-Object Tracking for vehicles and pedestrians by fusing 2D and 3D appearance feature (from ResNet and MLP) and 2D motion feature (from Kalman Filter).

Machine Learning Engineer Intern

Feb. 2020 – July 2020

Momenta

Suzhou, China

• Generated pseudo labels for 2D facial key points by fusing 2D detection from multi-view cameras. Bootstrapped the model by training on pseudo labels.

PUBLICATION

- <u>Ce Zhang*</u>, Yan-Bo Lin*, Ziyang Wang, Mohit Bansal, Gedas Bertasius.

 SiLVR: A Simple Language-based Video Reasoning Framework (arXiv 2025) paper link
- <u>Ce Zhang</u>, Yale Song, Ruta Desai, Michael Louis Iuzzolino, Joseph Tighe, Gedas Bertasius, Satwik Kottur. Enhancing Visual Planning with Auxiliary Tasks and Multi-token Prediction (arXiv 2025) paper link
- Yulu Pan, Ce Zhang, Gedas Bertasius.

 BASKET: A Large-Scale Video Dataset for Fine-Grained Skill Estimation (CVPR 2025)
- <u>Ce Zhang</u>*, Taixi Lu*, Md Mohaiminul Islam, Ziyang Wang, Shoubin Yu, Mohit Bansal, Gedas Bertasius.

 A Simple LLM Framework for Long-Range Video Question-Answering (EMNLP 2024) paper link
- Qi Zhao*, Shijie Wang*, <u>Ce Zhang</u>, Changcheng Fu, Minh Quan Do, Nakul Agarwal, Kwonjoon Lee, Chen Sun AntGPT: Can Large Language Models Help Long-term Action Anticipation from Videos? (ICLR 2024) paper link
- <u>Ce Zhang</u>*, Changcheng Fu*, Shijie Wang, Nakul Agarwal, Kwonjoon Lee, Chiho Choi, Chen Sun Object-centric Video Representation for Long-term Action Anticipation (WACV 2024) paper link
- Zilai Zeng, <u>Ce Zhang</u>, Shijie Wang, Chen Sun Goal-Conditioned Predictive Coding as an Implicit Planner for Offline Reinforcement Learning (NeurIPS 2023) paper link

SERVICES

Conference Reviewer: NeurIPS 2025, ICCV 2025, CVPR 2025, ECCV 2024 (Outstanding Reviewer Award), ACL

Rolling Review (June 2024, Dec. 2024) Journal Reviewer: IEEE TCSVT

Workshop Organizer: T4V @ CVPR 2025, T4V @ CVPR 2024

TECHNICAL SKILLS

Languages: Python, C/C++, Go

Deep Learning Frameworks: PyTorch, TensorFlow

Other: Slurm, Git, Docker