

Ziyan Wang

wzygundam13@gmail.com | <https://ziyanw1.github.io> | [linkedin.com/in/ziyanw1](https://www.linkedin.com/in/ziyanw1) | Google Scholar

EDUCATION

Carnegie Mellon University, Pittsburgh

Aug 2019 - Sep 2023

Ph.D. in Robotics, **Computer Science**

Advisor: Prof. Jessica Hodgins

Thesis title: Towards Photorealistic Dynamic Capture and Animation of Human Hair and Head

Carnegie Mellon University, Pittsburgh

Aug 2017 - Dec 2018

M.S. in Computer Vision, **Computer Science**

GPA: 4.11/4.30

Tsinghua University, Beijing

Aug 2013 - Jul 2017

B.E. in Automation, **Information of Science and Technology**

GPA: 90/100 (Major: 92/100), Ranking: top **5%** (7/145)

WORK EXPERIENCE

Meta Platforms, Inc.

Oct 2023 - Now

Research Scientist, Reality Labs Research, Sausalito

- Developed an internal multiview diffusion transformer (DiT) model for generating view consistent, photorealistic textures for 3D assets.
- Led development of a 3D foundation model enabling personalized avatar reconstruction from few mobile phone images, contributing to Meta's next-gen avatar creation stack.
- Led the development a real-time avatar streaming system (SDF geometry + RGB-D input), supporting 30FPS performance on production hardware.

Meta Platforms, Inc.

Apr 2021 - Jun 2023

Visiting Researcher, Reality Labs Research, Codec Avatar

- Pioneered a VAE-based tracking framework with a hybrid neural volumetric representation, achieving photorealistic and efficient 3D dynamic capture of human hair and wigs.
- Designed an autoregressive animation model for 3D avatars from head poses, enabling realistic facial and hair dynamics with physics-aware motion.
- Created data-driven algorithms for strand-accurate hair reconstruction from LightStage and CT-scan data, advancing realism in virtual human capture.
- Proposed an efficient VAE architecture for compositional 3D radiance field, enabling scalable capture of realistic hairstyles with diverse shape and appearance.

Meta Platforms, Inc.

May 2020 - Dec 2020

Research Intern, Reality Labs Research, Codec Avatar

- Built a 3D VAE training pipeline with differentiable volumetric rendering, enabling learning of photorealistic 3D avatars from 2D videos (lightstage).
- Designed a hybrid NeRF-based representation for talking head animation and synthesis, achieved photorealistic animation.

Amazon Web Service (AWS)

Apr 2019 - Aug 2019

Applied Scientist Intern, Rekognition and Video

- Built a monocular 3D face reconstruction pipeline using self-supervised inverse rendering, improving geometric consistency across views.

NEC Laboratories American, Cupertino

May 2018 - Aug 2018

Research Assistant, Media Analytics Group

- Proposed a rich, parameterized model for describing complex road layouts in top-view representations with an accompanying dataset, enabling learning-based top-view scene parsing from monocular input.

SELECTED PUBLICATIONS

Full list is available at [here](#).

- **Fresa: Feedforward reconstruction of personalized skinned avatars from few images.**
CVPR 2025 (Spotlight). Rong Wang, Fabian Prada, **Ziyan Wang**, et al.
- **A Local Appearance Model for Volumetric Capture of Diverse Hairstyles**
3DV 2024 (Oral). **Ziyan Wang**, et al.
- **NeuWigs: A Neural Dynamic Model for Volumetric Hair Capture and Animation**
CVPR 2023. **Ziyan Wang**, et al.
- **CT2Hair: High-Fidelity 3D Hair Modeling using Computed Tomography**
SIGGRAPH 2023. Yuefan Shen, Shunsuke Saito, **Ziyan Wang**, et al.
- **Learning Compositional Radiance Fields of Dynamic Human Heads**
CVPR 2021 (Oral). **Ziyan Wang**, et al.
- **Geometry-Aware Recurrent Neural Networks for Active Visual Recognition**
Neurips 2018. Ricson Cheng*, **Ziyan Wang***, et al.

AWARDS AND ACTIVITIES

2016	Tsinghua Spark Scientific and Technological Innovation Program (top 1.5%)
2016/2015	Scholarship for Excellent Academic Performances(top 3.33%)
2014	Broad chairman of Tsinghua Spark Club
2014	Second Prize in 31th China Regional College Students Physics competition(top 0.8%)

COMPUTER SKILLS

Basic Knowledge: Python, PyTorch, TensorFlow, C/C++, Matlab, Linux, $\text{\LaTeX}$, Blender