# Wenbin Teng

Curriculum Vitae

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# Education

Aug 2022 - University of Southern California, Los Angeles, CA,

May 2027 Ph.D. in Computer Science, Focus: Computer Vision and Computer Graphics, GPA 3.65/4.0. Advisor: Yajie Zhao

### Sep 2015 - Boston University, Boston, MA,

- Jan 2019 B.A. in Statistics, B.A. in Economics, Magna Cum Laude, Dean's list (7 semesters), GPA: 3.77/4.0, Statistics Major GPA: 3.93/4.0.
- Sep 2013 Xi'an Jiaotong University, Xi'an, Shaanxi, China,
  - July 2015 Concentration in Finance, GPA: 83.8/100.

### **Research Interests**

Video Generation, Diffusion Models, Novel View Synthesis, 3D Reconstruction

### Publications

- 2024 Gao, Z., **Teng, W.**, Chen, G., Wu, J., Qin, R., Zhao, Y., "Skyeyes: Ground Roaming using Aerial View Images", arxiv preprint, 2024.
- 2024 Chen, G., Wu, J., Gao, Z., **Teng, W.**, Qin, R., Zhao, Y., "GeoAmplifier: Feature Matching Enhancement through Geometry-Aware Optimization," arxiv preprint, 2024.
- 2023 Yang, J., Xiao, H., **Teng, W.**, Cai, Y., Zhao, Y., "Light Sampling Field and BRDF Representation for Physically-based Neural Rendering," In The Eleventh International Conference on Learning Representations.
- 2021 Teng, W. and Bai, C., "Unimodal Face Classification with Multimodal Training," 2021 16th IEEE International Conference on Automatic Face and Gesture Recognition (FG 2021), 2021, pp. 1-5, doi: 10.1109/FG52635.2021.9666965.

### Experience

### Aug 2022 – Research Assistant, USC Institute for Creative Technologies.

- Present o Lead research projects on scene construction and sparse novel view synthesis with image and video diffusions.
  - Participated in research projects related to feature matching, Structure from Motion Reconstruction, NeRF and 3D Gaussian Splatting.
    - $\circ~$  Submitted and published research papers to ICLR, 3DV and WACV.

May 2024 – Research Intern	, SRI International,	Center for Vision	Technologies.
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- Aug 2024 Research on sparse novel view synthesis with multi-view and video diffusion models.
  - Research on sparse 3D reconstruction with customized 3D Gaussian Splatting.

### Oct 2020 - Research Intern, Department of Computer Vision Technology, Baidu Inc..

Mar 2021 • Proposed an image-to-image translation framework for unsupervised domain adaptation on cross-database face anti-spoofing.

# May 2020 - Research Intern, Johns Hopkins University CCVL Lab, Advisor: Alan Yuille. Oct 2020 • Researched on model-based face autoencoder for 3D face rendering. • Performed iterative adversarial attack on the autoencoder through perturbation optimization. Jan 2020 - Research Assistant, Dartmouth College, Advisor: Chongyang Bai. • Proposed a multimodal training and unimodal testing (MTUT) framework on face classification task. • Constructed a first-author research paper and published in IEEE FG 2021. Jan 2018 - Research Assistant, Boston University, Advisor: Allen G. Harbaugh. • Conducted research on patterns of model selection protocols such as Mallow's Cp and information criteria with simulated data. • Presented primary experiment result in Modern Modelling Methods (MMM) Conference 2018; presented project poster in Boston University Undergraduate Research Opportunity Program (UROP) symposium. Academic Service 2025 WACV, CVPR

# Teaching

- Aug 2022 University of Southern California, Teaching Assistant.
  - Dec 2022 Introduction to Programming in C++ (CSCI 103L). Instructor: Prof. Mark Redekopp.
- Jan 2023 University of Southern California, Teaching Assistant.
- May 2023 o Database Systems (CSCI 585). Instructor: Prof. Saty Raghavachary.
- Aug 2024 University of Southern California, Teaching Assistant.
  Dec 2023 o Introduction to Artificial Intelligence (CSCI 360). Instructor: Prof. Mohammad Reza Rajati.

# Honors & Awards

- 2019 Magna Cum Laude, Boston University
- 2015 2018 Dean's List, Boston University
  - 2018 UROP Stipends Award, Boston University

# Skills & Interests

- $\label{eq:programming_progra$ 
  - Frameworks PyTorch, Tensorflow, Keras, PaddlePaddle
- Utilities Anaconda, Git, Jupyter Notebook
- Languages Mandarin (Native), English (Fluent)
  - Interests Badminton, Fitness, Cooking

# Relevant Courses

- USC 3D Rendering and Graphics, Advanced Analysis of Algorithms, Advanced Computer Vision, Mathematics of High-Dimensional Data
- Boston Machine Learning, Probability, Computational Statistics, Data Science in R, Mathematical Statistics, University Introduction to Stochastic Processes, Time Series and Forecasting, Linear Models, Applied Multiple Regression and Multivariate Methods.