

George Z. Wei

CURRICULUM VITAE

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<https://gzhongwei.github.io>

Research Interests

3D/4D reconstruction and video generation, with a focus on bridging synthetic and real-world data to develop robust, generalizable methods for dynamic scene understanding and photorealistic generation.

Education

Carnegie Mellon University

M.S. Robotics (Advisor: [László A. Jeni](#))

[Pittsburgh, PA](#)

05/26 (expected)

University of Massachusetts Amherst

B.S. Computer Science & Statistics/Data Science (Advisors: [Mohit Iyer](#) & [Ina Fiterau](#))

[Amherst, MA](#)

05/22

- Thesis: Analyzing Low Recall Text-Image Retrieval with LXMERT and CLIP

Experience

Adobe Research

Research Scientist/Engineer Intern under [Krishna Mullia](#)

[San Francisco, CA](#)

05/25 – 08/25

- Designed a synthetic turntable pipeline with HDR and high-resolution support for advancing 8K Gaussian Splatting-based 3D reconstruction.
- Achieved an 8% PSNR gain over prior methods, demonstrating significant quality improvements.

FAIR, AI @ Meta

AI Resident under [Satwik Kottur](#)

[Menlo Park, CA](#)

07/22 – 07/24

- Worked on egocentric video-language modeling and long egocentric video understanding.
- Experimented with bootstrapping high-level goals of camera wearers from Ego4D narrations.

Combinatorics and Algorithms for Real Problems REU

Research Intern under Prof. [John P. Dickerson](#) and Prof. [Tom Goldstein](#)

[College Park, MD](#)

06/21 – 05/22

- Worked on facial detection robustness and facial recognition bias.

Skills

Languages

Python, TypeScript, JavaScript, \LaTeX , C++, C, HTML

ML Tools

PyTorch, PyTorch Lightning, HuggingFace, Hydra, submitit, Mephisto, OpenCV

Publications

* indicates equal contribution

1. **MAVERIX: Multimodal Audio-Visual Evaluation Reasoning Index**
Liuyue Xie*, **George Z. Wei***, Avik Kuthiala*, Ce Zheng, Ananya Bal, Mosam Dabhi, Liting Wen, Taru Rustagi, Ethan Lai, Sushil Khyalia, Rohan Choudhury, Morteza Ziyadi, Xu Zhang, Hao Yang, László A. Jeni.
arXiv. 2025.
2. **Robustness Disparities in Face Detection**
Samuel Dooley, **George Z. Wei**, Tom Goldstein, John Dickerson.
Advances in Neural Information Processing Systems. 2022.
3. **Maruna Bot: An Extensible Retrieval-Focused Framework for Task-Oriented Dialogues**
Amit Hattimare, Arkin Dharawat, Yelman Khan, Yen-Chieh Lien, Chris Samarinas, **George Z. Wei**, Yulin Yang, Hamed Zamani.
Alexa Prize TaskBot Challenge Proceedings. 2022.
4. **Are Commercial Face Detection Models as Biased as Academic Models?**
Samuel Dooley*, **George Z. Wei***, Tom Goldstein, John P. Dickerson.
arXiv. 2022.
5. **An Analysis of Low Recall Text-Image Retrieval with LXMERT and CLIP**
George Z. Wei, Ina Fiterau, Mohit Iyyer.
Undergraduate Honors Thesis. 2021.
6. **Comparing Human and Machine Bias in Face Recognition**
Samuel Dooley*, Ryan Downing*, **George Z. Wei***, Nathan Shankar, Bradon Thymes, Gudrun Thorkelsdottir, Tiye Kurtz-Miott, Rachel Mattson, Olufemi Obiwumi, Valeriia Cherepanova, Micah Goldblum, John P. Dickerson, Tom Goldstein.
arXiv. 2021.

Teaching

Teaching Assistant

Robotics Institute
Learning for 3D Vision

Carnegie Mellon University

Fall 2025 – Present

Fall 2025

Undergraduate Course Assistant

Manning College of Information and Computer Sciences
Computer Networking
Introduction to Computer Graphics
Introduction to Algorithms
Introduction to Problem Solving with Computers

UMass Amherst

Fall 2019 – Spring 2022

Spring 2021 – Spring 2022

Spring 2022

Fall 2020

Fall 2019, Spring 2020

Relevant Coursework

Carnegie Mellon University

Learning for 3D Vision, Learning-Based Image Synthesis, Deep Learning Systems: Algorithms and Implementation, Geometry-based Methods in Vision, Introduction to Robot Learning, Math Fundamentals for Robotics

UMass Amherst

*Intelligent Visual Computing, Advanced NLP, Conversational AI, Machine Learning,
Introduction to Partial Differential Equations*

Honors and Awards

Outstanding UCA Award

Manning College of Information and Computer Sciences

Computer Networking
Introduction to Algorithms

UMass Amherst

Fall 2020 – Fall 2021

Spring 2021, Fall 2021

Fall 2020

Academic Service

Reviewer

DSTC11 Track 1

'22

NeurIPS Datasets and Benchmark Track

'22