George Z. Wei

CURRICULUM VITAE

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Research Interests

Interested in multimodal foundation models as well as 3D computer vision, specifically spatial understanding and 3D reconstruction.

Education

Carnegie Mellon University   *Pittsburgh, PA*
M.S. Robotics (Advisor: László A. Jeni)   *2024 – 2026*

University of Massachusetts Amherst   *Amherst, MA*
B.S. Computer Science & Statistics/Data Science (Advisors: Mohit Iyyer & Ina Fiterau)   *2018 – 2022*
- Thesis: Analyzing Low Recall Text-Image Retrieval with LXMERT and CLIP

Experience

FAIR, AI @ Meta   *Menlo Park, CA*
AI Resident under Satwik Kottur   *Jul 2022 – Jul 2024*
- Developed annotation tooling to gather crowdworkers' relevance judgements of candidate goals given egocentric video using `Mephisto`, drastically decreasing annotation turnaround time by **80%**.
- Refactored EgoVLP to use `hydra`, `submitit`, and `pytorch_lightning`, leading to much faster experiment iteration speed.

Combinatorics and Algorithms for Real Problems REU   *College Park, MD*
Research Intern under Prof. John P. Dickerson and Prof. Tom Goldstein   *Jun 2021 – May 2022*
- Standardized and sped up inference code of SOTA Facial Detection to produce predictions on 3 million+ images in days.
- Developed the front end survey for comparing human and machine bias in face recognition as well as the backend for serving the webpages.

Publications

* indicates equal contribution

1. **Robustness Disparities in Face Detection**
   Samuel Dooley, **George Z. Wei**, Tom Goldstein, John Dickerson.
   Advances in Neural Information Processing Systems. 2022.
2. **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.

3. **Are Commercial Face Detection Models as Biased as Academic Models?**
   Samuel Dooley*, **George Z. Wei***, Tom Goldstein, John P. Dickerson.
   arXiv. 2022.

4. **An Analysis of Low Recall Text-Image Retrieval with LXMERT and CLIP**
   George Z. Wei, Ina Fiterau, Mohit Iyyer.
   Undergraduate Honors Thesis. 2021.

5. **Comparing Human and Machine Bias in Face Recognition**
   Samuel Dooley*, Ryan Downing*, **George 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.

Honors and Awards

Outstanding UCA Award
UMass Amherst

Manning College of Information and Computer Sciences
Fall 2020 – Fall 2021

COMPSCI 453: Computer Networking
Spring 2021, Fall 2021
COMPSCI 311: Introduction to Algorithms
Fall 2020

Academic Service

Reviewer

DSTC11 Track 1
'22
NeurIPS Datasets and Benchmark Track
'22

Undergraduate Course Assistant
UMass Amherst

Manning College of Information and Computer Sciences
Fall 2019 – Spring 2022

COMPSCI 453: Computer Networking
Spring 2021 – Spring 2022
COMPSCI 373: Introduction to Computer Graphics
Spring 2022
COMPSCI 311: Introduction to Algorithms
Fall 2020
COMPSCI 121: Introduction to Problem Solving with Computers
Fall 2019, Spring 2020