

Zhewen Zheng

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Education

Carnegie Mellon University

2025/08 – present

M.S. in Computer Vision (Expected Dec 2026)

- Relevant Coursework: Advanced Computer Vision, Intro to Robot Learning, Learning for 3D Vision

University of Washington

2017/09 – 2022/06

B.A. in Mathematics, B.S. in Informatics (Graduated with Interdisciplinary Honors)

3.75/4.0

- Relevant Coursework: Data Structures/Algorithms, Machine Learning, Computer Graphics, Multi-variable Calculus, Linear Algebra, Probability, Numerical Analysis, Abstract Algebra

Academic Experience

Research Assistant at Shanghai AI Laboratory

2024/02 – 2025/08

- Co-designed an on-the-fly 3D reconstruction framework unifying 3D Foundation Models, SLAM, and 3DGS.
- Designed and refined a multi-camera rig with automated capture script, enabling efficient image data collection.
- Created a custom Blender Addon to interactively filter COLMAP SfM camera results for streamlined preprocessing.

Research Assistant at UW Information School

2021/05 – 2022/03

- Co-designed VR/Zoom second-language workshops, ran interviews and data collection, and performed quantitative analysis comparing learning and affective outcomes.

Publications

- Guanghao Li, Kerui Ren, Linning Xu, **Zhewen Zheng**, Changjian Jiang, Xin Gao, Bo Dai, Jian Pu, Mulin Yu, Jiangmiao Pang. “ARTDECO: Towards Efficient and High-Fidelity On-the-Fly 3D Reconstruction with Structured Scene Representation.” *arXiv:2510.08551*, 2025. Under review at ICLR 2026. [paper](#)
- Cho, Yeonhee; Hsu, Hao Ning; **Zhewen Zheng**; Trinh, Emily E.; Jang, HyunYoung; Cheng, Yusi. “Research Based on Affective Filter Theory: Is Social VR an Effective Tool for Learning a Second Language?” *iLRN 2022*, pp. 1–7. DOI: 10.23919/iLRN55037.2022.9815924. [paper](#)

Work Experience

Machine Learning Engineer at ObvioHealth

2022/08 – 2023/06

- Led a team of five to develop a LangChain-based Web Portal, leveraging LLMs to reduce clinical protocol drafting time.
- Built a clinical outcome measures search tool that queried AACT database, enhancing in-house data analysis capabilities.
- Replicated published results, designed, and trained an image-based stool classifier for faster clinical workflows.
- Developed synthesis pipeline using Instant-NGP and Blender as data augmentation in segmentation model training.
- Analyzed over 2 million clinical trial data records, extracting actionable insights that influenced clinical trial design.

Student Assistant Web Developer at UW Information School

2020/09 – 2021/01

- Developed an interactive escape-room website for a misinformation study using React.
- Utilized Docker for continuous deployment, ensuring seamless updates and testing of the web application.

Projects

Social Media Sentiment Analysis at University of Washington

2021/01 – 2021/06

- Developed a web crawler to collect filtered social media data (Twitter, Facebook, Reddit) from 2018 to 2020.
- Performed sentiment analysis on over 5,000 replies using NLTK and Scikit-learn, uncovering trends and patterns.

Skills

Technologies

React, NodeJS, Flask, Docker, Blender, Unreal Engine, CUDA

Programming Languages

Python, C++, Java, MATLAB, JavaScript

Technologies

PyTorch, Scikit-learn, SciPy, NumPy, Pandas