Yuzhong Huang

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RESEARCH INTERESTS

Scene Reconstruction; Neural 3D Representation; Generative Models

EDUCATION

University of Southern California (USC)

Ph.D. in Computer Science. Advisor: Fred Morstatter.   *Aug 2019 - Dec 2024*
Thesis: *Semantic Structure in Understanding and Generation of the 3D World*

M.S. in Electrical Engineering.   *Aug 2017 - May 2019*

Zhejiang University, China

B.Eng. in Computer Science.   *Aug 2012 - Jun 2016*

PUBLICATIONS

OrientDream: Streamlining Text-to-3D Generation with Explicit Orientation Control

Yuzhong Huang, Li Zhong, Chen Zhang, Fred Morstatter, Yu Xi
ICASSP 2025.

PlanarNeRF: Online Learning of Planar Primitives with Neural Radiance Fields

Zheng Chen, Qingan Yan, Huangying Zhan, Changjiang Cai, Xiangyu Xu, **Yuzhong Huang**, Et al.
ICRA 2025.

The Unequal Opportunities of Large Language Models: Revealing Demographic Bias through Job Recommendations

Abel Salinas, Parth Vipul Shah, **Yuzhong Huang**, Robert McCormack, Fred Morstatter
EAAMO 2023.

UniPlane: Unified Plane Detection and Reconstruction from Posed Monocular Videos

Yuzhong Huang, Chen Liu, Ji Hou, Ke Huo, Shiyu Dong, Fred Morstatter
ICASSP 2025.

Hybrid Forecasting of Geopolitical Events

Daniel M Benjamin, Fred Morstatter, **Yuzhong Huang**, Et al.
AI Magazine

Assessing Scientific Research Papers with Knowledge Graphs

Kexuan Sun, Zhiqiang Qiu, Abel Salinas, **Yuzhong Huang**, Dong-Ho Lee, Daniel Benjamin, Fred Morstatter, Xiang Ren, Kristina Lerman, Jay Pujara
SIGIR 2022.

Learning Where to Cut from Edited Videos

Yuzhong Huang, Xue Bai, Oliver Wang, Fabian Caba, Aseem Agarwala
CVEU @ ICCV 2021. Work done during Adobe internship.

Graph Embedding with Personalized Context Distribution

Yuzhong Huang, Di Huang, Zihao He, Kexuan Sun, Sami Abu-El-Haija, Bryan Perrozi, Kristina Lerman, Fred Morstatter, Aram Galstyan
Oral, DL4G @ WWW 2020.

Anchor Attention for Hybrid Crowd Forecasts Aggregation

Yuzhong Huang, Andrés Abeliuk, Fred Morstatter, Pavel Atanasov, Aram Galstyan
AAMAS 2020

Statistical Equity: A Fairness Classification Objective

Ninareh Mehrabi, **Yuzhong Huang**, Fred Morstatter
EAAMO 2021.

On extended long short-term memory and dependent bidirectional recurrent neural network

Yuanhang Su, **Yuzhong Huang**, and C.-C. Jay Kuo
Neurocomputing , 2019, Vol.356, p.151-161

Efficient Text Classification Using Tree-structured Multi-linear Principal Component Analysis

Yuanhang Su, **Yuzhong Huang**, and C.-C. Jay Kuo
ICPR 2018.

InteriorNet: Mega-scale multi-sensor photo-realistic indoor scenes dataset

Wenbin Li, Sajad Saeedi, John McCormac, Ronald Clark, Dimos Tzoumanikas, Qing Ye, **Yuzhong Huang**, Rui Tang, Stefan Leutenegger
BMVC 2018.

EXPERIENCE

USM3D

Organizer of USM3D Workshop and Competition   *CVPR 2024, 2025*

Hover, Inc

Senior Computer Vision Research Engineer   *Jan 2024 - Present*
- Working on indoor and outdoor scene reconstruction research
- Working on conditional image generation based on text description

OPPO US

Research Intern   *May 2023 - Aug 2023*
- Working on text to 3D research.

Meta, Inc

Research Intern   *May 2022 - Aug 2022*
- Working on scene reconstruction from posed monocular video.

Adobe, Inc

Research Intern   *May 2020 - Aug 2020*
- Working on video understanding and temporal video segmentation

Media Communications Lab, USC

Student worker   *Sep 2017 - Jun 2018*

- Propose ELSTM, a variant of LSTM cell with extended memory capacity.
- Propose TMPCA, a tree structure accelerated PCA for text classification.

Hangzhou Qunhe Information Technology

Software Engineer   *Jul 2016 - Jul 2017*
- Integrate image super resolution into a CUDA-based GPU renderer engine.
- Propose an albedo map guided image super resolution method to improve texture detail quality.
- Implement steganography in renderer engine for copyright protection.