Jinbin Huang

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Summary

I design and develop interactive interfaces to help people understand machine learning models. I also apply immersive technologies to enhance sense-making in data analytics.

Education

Arizona State University — Tempe, AZ
Ph.D. in Computer Science — *Aug. 2019 – Present*

Sun Yat-Sen University — Guangzhou, China
B.S. in Mathematics — *Aug. 2014 – May 2018*

Research Experience

Graduate Research Assistant — Fall 2019 – Present
Arizona State University — *Tempe, AZ*

- Advisor: Chris Bryan
- Research on eXplainable AI and immersive analytics

Research Intern — May 2022 – Aug 2022
Bosch USA — *Sunnyvale, CA*

- Mentor: Wenbin He
- Designed and developed deep learning explanation system using vision-language model and prototypical concepts

Research Assistant — Summer 2018 – Summer 2019
Duke Kunshan University — *Kunshan, China*

- Developed deep learning based image stitching algorithms for an array of nine megapixel cameras by leveraging topological structure of the target array camera and an optical-flow estimating super-resolution network

Industrial Experience

AR R&D Intern — May 2021 – Aug 2021
OPPO U.S. Research Center — *Palo Alto, CA*

- Designed and conducted empirical study to test various designs for comfortable mid-air gesture interaction
- Developed functions for mid-air gesture based object manipulation

Publications

Huang J., Mishra A., Kwon B., Bryan C. (2022) ConceptExplainer: Interactive Explanation for Deep Neural Networks from a Concept Perspective, in *IEEE Transactions on Visualization and Computer Graphics*

Huang J., Liang S., Xiong Q., Gao Y., Mei C., Xu Y., Bryan C. (2022) SPARVIS: Combining Smartphone and Augmented Reality for Visual Data Analytics, in *IEEE ISMAR 2022 Conference, Visual Analytics in Immersive Environments (VAinIE) Workshop*

Mishra A., Soni U., **Huang J.**, Bryan C. (2022), Why? Why not? When? Visual Explanations of Agent Behavior in Reinforcement Learning *2022 IEEE Pacific Visualization Symposium (PacificVis)*, pp. 111-120. IEEE, 2022

Huang, J., Plasencia J., Bardo D., Rubert N., Ellsworth E., Zangwill S., Bryan C. (2021) Phoenix Virtual Heart: A Hybrid VR-Desktop Visualization System for Cardiac Surgery Planning and Education, *2021 IEEE Workshop on Visual Analytics (VAHC)*, pp. 36-40. IEEE, 2021

Huang, J., Mishra A., Arunkumar A., Bryan C. (2020) TotemFinder: A Visual Analytics Approach for Image-based Key Players Identification, *2020 IEEE Conference on Visual Analytics Science and Technology (VAST Challenge)*, **Honorable Mention**

Skills

JavaScript, c#, Unity, TensorFlow, Python, d3.js, React.js, tensorflow.js, PyTorch