

# Yixuan LI

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## EDUCATION

**University of California, Santa Barbara, United States** Sept. 2021- Present

- Master of Science in Media Arts and Technology
- Cumulative GPA: 4.0/4.0
- Research Topics: Data Visualization, Technology for Public, HCI, Computational Aesthetics

**Fudan University, Shanghai, China** Sept. 2017- Jun. 2021

- Bachelor of Science in Data Science and Big Data Technology
- Coursework: Linear Algebra, Statistical Machine Learning, Artificial Intelligence, Deep Learning, Data Visualization, Museum Informatic, Formal Design of Museum Display
- Award: School-level Undergraduate Outstanding Scholarship, Undergraduate Professional Scholarship in STEM Major, Mathematical Contest in Modeling Honorable Mention Prize

## PUBLISHED WORK

- **Yixuan Li et. al.** Diverse Interaction Recommendation for Public Users Exploring Multi-view Visualization using Deep Learning. IEEE Transactions on Visualization and Computer Graphics (VIS'22), Accepted, Oct 16-21, Oklahoma, USA.
- **Yixuan Li.** *Analysis of the Application of Image Recognition in the Field of Museum Digital Content.* Benevolence and Excellence: Digital Humanities and Chinese Culture (CDH 2020) Oct 19-21, 2020, Shanghai, China.
- **Yixuan Li et. al.** *Finding the Key Factors for Movie Influence Using Machine Learning and Sentiment Analysis.* 2nd International Conference on Machine Learning, Big Data and Business Intelligence (MLBDBI 2020) October 23-25, 2020, Chengdu, China.

## RESEARCH EXPERIENCE

**Visualization and Computational Aesthetics** Sept. 2021 - Present

*Graduate Researcher*, Advisor: George Legrady, Experimental Visualization Lab, UCSB.

- Research on 3D visual representations of cross-modal data including audio, speech and text.
- Created an art installation that converts audience speech input to architectures in 3D space in real-time using deep learning in Panda3D. The work was submitted to ISEA2023.
- Design and instruct courses on Computational Aesthetics and Data Visualization, covering topics on computer vision, text2img algorithms and tools, and 3D data visualization using Processing.

**Data Visualization For The Mass** Sept. 2020 – Sept. 2021

*Research Assistant*, Advisor: Siming Chen, FDU-VIS, Fudan University.

- Researched on how to promote knowledge accessibility to novice users using data visualization.
- Developed a data visualization system inspired by Hoag's Object to present Su Dongpo's life story using D3.js. The corresponding video won the Storytelling Contest of IEEE PacificVis'21.

- Conducted a working pipeline that provides interaction recommendations for public users using multi-view visualization in public education scenarios. The work was accepted by IEEE VIS22.

### **Posters' layout automatically design system with AI and CV**

July 2020 – Nov. 2020

*Research Assistant*, Advisor: Ling Fan, Design & AI Lab, Tongji University.

- Developed a Reinforcement Learning framework that resembled the actual designing process and used a Graph Convolutional Network for the purpose of layers' positions initialization.
- Built aesthetic evaluation functions with reference to design theories to extract layout features and constructed an aesthetic evaluation model as a step-out condition for RL generation process
- Developed and packaged the template of particle, material, and lighting effects with the help of Unreal Engine 4 to make 3D development easier and more convenient for general designers.

### **Recognizing Characters in Art History Using Deep Learning**

May 2020 – Sept. 2020

*Research Assistant*, Advisor: Andreas Maier, Pattern Recognition Lab, Friedrich-Alexander-Universität

- Conducted image classification and innovatively retrained the ResNet50 network on the style-transferred-VggFace dataset by adding more image features to achieve a greater accuracy.
- Applied Grad-CAM algorithm for the training process visualization to understand which semantic information in the scenes the model captures to make classifications.
- Prepared and cleaned dataset consisting of 10,000 + images with face and body crops of characters in the Annunciation of the Lord, covering the first century until 800 AD.

## **EXTRACURRICULARS**

### **The 3rd China International Import Expo**

Nov. 2020

Volunteer of the opening ceremony

Shanghai, China

### **Viva La Vida ( Online Database for Sharing Human Stories and Art )**

Jan. 2020 - Apr. 2020

Volunteer of product development and cross-cultural analysis

Beijing, China

### **Fudan Ballroom Dance Association**

Sept. 2019 -June 2020

President

Shanghai, China

## **SKILLS AND INTERESTS**

**Language:** English, Chinese

**Program:** Python | R | C | C# | JavaScript | D3.js | Processing | MATLAB | PyTorch | TensorFlow

**Software:** Unity | Unreal Engine | TouchDesigner | AutoCAD | Blender | Max/MSP | Logic Pro

**Certificate:** Machine Learning Certificate by Andrew Ng