

# 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
- CourseWork: Future User Interface, Designing Expressive Technologies, Digital Audio Programming, Data Visualization, Computer Graphics

### Fudan University, Shanghai, China

Sept. 2017- Jun. 2021

- Bachelor of Science in Data Science and Big Data Technology
- Coursework: Statistical Machine Learning, Artificial Intelligence, Deep Learning, Data Visualization, Museum Informatic, Formal Design of Museum Display
- Award: 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.

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- 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

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