

# HAOTIAN LIU

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## EDUCATION

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### Chu Kochen Honors College, Zhejiang University

*September 2015 – Present*

Bachelor of Computer Science and Technology (expected June 2019)

- Dual Degree of English Language and Literature
- *Research Intern* at [CAD&CG State Key Laboratory](#)
- Overall GPA: **3.94**/4
- Ranking: **Top 5%** among the 208 students
- Advisor: [Prof. Xiaogang Jin](#) & [Prof. Fei Wu](#)

### University of California, Davis (UC Davis)

*July – October 2018*

ML&AI Lab, [GREAT](#) Program

- *Undergraduate Visiting Research Intern*
- Advisor: [Prof. Yong Jae Lee](#)

### Hong Kong University of Science and Technology (HKUST)

*July 2017*

- [SENG Summer Camp for Elite Students](#)
- *Undergraduate Visiting Student*

## PUBLICATIONS

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- Y Chen, **H Liu**, and L Shi. "Operation strategy of public building: Implications from trade-off between carbon emission and occupant satisfaction." [[sciencedirect](#)]  
Journal of Cleaner Production 205 (2018): 629-644.
- A Generative Model that extracts and learns disentangled representations.  
In submission to **a top-tier computer vision conference**.
- **SRSF: Scalable Reconstruction System with High-Fidelity Textures.** To be submitted.

## RESEARCH EXPERIENCE & SELECTED PROJECTS

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### Design2Code with [Alibaba](#)

*August 2018 – Present*

*Research Intern*

*Hangzhou, China*

- Ongoing project to automatically generate layout code for a precise reproduction of massive UI designs of *Alibaba* product lines
- To improve the generalization ability of the current state-of-the-art on real and complex settings
- Presents as my undergraduate thesis at Zhejiang University

### UC Davis [GREAT](#) Summer Research Program

*July – October 2018*

*Research Intern, Outstanding Research Performance Award, Grade A<sup>+</sup>*

*Davis, CA*

- The model learns to disentangle the identity and pose of two images, using unlabeled videos; generates an image composed of the identity of the first image, and the pose of the second one
- Built up a new dataset rendered from ShapeNet for training disentangled features
- Experimented and optimized the model on cross-category and cross-domain settings to examine and enforce disentanglement
- Proposed and implemented a semantically realistic image blending system
- Submitting a full paper to **a top-tier computer vision conference**

**SRSF: Scalable Recon-System with High-Fidelity Textures**  
*Project Leader*

*September 2017 – Present*  
*Hangzhou, China*

- Proposed an optimized form of rigid correction correcting both rigid and non-rigid errors
- Accelerated and made the texture mapping scalable while benefiting from the preciseness and fidelity of current state-of-the-art
- CPU version has a **5x** speed boost; currently working on a GPU version for more improvements
- Assessed as **Outstanding** Project (**91/100**) of State-Level Research Innovation Program
- Will submit a full paper as the first author

**Xiao-I Robot, with State Key Lab of CAD & CG (ZJU)**  
*Research Intern*

*July – September 2017*  
*Hangzhou, China*

- Built up **AI+ Service Robot** frontends for commercial banks
- Implemented skeletal animation of the robot, optimized and accelerated the rendering pipeline

## SELECTED HONORS AND AWARDS

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- **Outstanding Research Performance** in UC Davis GREAT Program (2018)
- **First-Class** Scholarship for Outstanding Students (2015-2016)
- Student Award for **Research and Innovation** (2017-2018)
- Outstanding **Student Leader** Awards (2016-2017) (2017-2018)
- Scholarship for Outstanding Merits (2015-2016) (2016-2017) (2017-2018)
- Excellent Social Work Scholarship (2015-2016) (2016-2017) (2017-2018)

## LEADERSHIP ACTIVITIES

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**QSC Website of ZJU**

*September 2015 – June 2018*

- (2017-2018) **President**, presided over and coordinated the direction of the organization
- (2016-2017) **Vice Director** of Tech. Center, directed over several products (over 500,000 requests per day at peak) and maintained 6 servers (with about 100 KVM, LXC, and Docker machines).
- (2015-2016) **Engineer**, developed **QSC Mobile API** and **QSC Exam** (serves 6000+ concurrent requests, in use for official)

## ADDITIONAL INFORMATION

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**Research Interests:** Computer Vision, Machine Learning, Computer Graphics

**Programming Languages:** Python, C/C++, MATLAB, JavaScript, Swift, Verilog, VHDL, Node.js, Markdown,  $\LaTeX$ , PHP, HTML/CSS

**Toolkits and Frameworks:** CUDA, OpenCL, OpenGL, Metal

**Deep Learning Frameworks:** PyTorch (preferred), Tensorflow

## ENGLISH PROFICIENCY

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- **TOEFL: 116** (Reading **30**, Listening **29**, Speaking **27**, Writing **30**)
- **TEM-4: Excellent** (English proficiency test designed for English-majored students in China)

If you would like to know more about my research experiences and projects, please visit my [homepage](#). Thank you!