

# Curriculum Vitae

## Basic information

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Name: Ruilong Li (李瑞龙)  
Date and country of Birth: 07/06/1994 China  
Gender: Male  
Contact information: [li-rl16@mails.tsinghua.edu.cn](mailto:li-rl16@mails.tsinghua.edu.cn), +86-15652796980  
Contact address: Room 9-209, East Main Building,  
Tsinghua University, 100084, Beijing, China  
Homepage: <https://liruiliong940607.github.io/>

## Educational background

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2016.09 – 2019.07 Master Candidate, **Tsinghua University, Beijing, China**  
Major: Computer Science and Technology  
Research Group: Graphics & Geometry Computing Group  
Advisor: Prof. Shi-Min Hu  
Research Interest: Computer Vision & Machine Learning

2012.09 – 2019.07 Bachelor of Science, **Tsinghua University, Beijing, China**  
Major: Basic Science of Physics and Mathematics.

## Internship experiences

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2017.06 – 2017.08 Algorithm Engineer, **Bytedance Company, Beijing, China**  
• Designed and trained a realtime CNNs for portrait hair matting. This algorithm had been integrated into FaceU APP.

2016.06 – 2016.09 Algorithm Engineer, **DeepGlint Company, Beijing, China**  
• Designed a realtime matching algorithm based on GIST feature. Further designed a fast tracking algorithm for vehicles in surveillance videos based on bounding-box detection.

## Research experiences

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Research fields: Computer Vision & Machine Learning.  
Involved research programs:

2017.12 – Present Study on using human pose to guide and improve instance segmentation, especially on occlusion cases.

2018.03 – 2018.06 Portrait image completion and extrapolation using GAN.

2017.09 – 2017.12 Study on 2D human pose estimation. Achieve Sixth place in AIChallenger competition.

2017.06 – 2017.09 Design and train a realtime CNNs for portrait hair matting on mobile devices. (in Bytedance Company)

2016.09 – 2017.06 Design and train a realtime CNNs for portrait segmentation and background removal on mobile devices.

2016.06 – 2016.09	A fast tracking algorithm based on bounding-box detection. (in DeepGlint Company)
2015.09 – 2016.06	Cartoon animations segmentation and vectorization.
2015.06 – 2015.09	Using SVM and CNNs to detect and remove visual distractors in videos based on superpixels.

### **Publications**

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- **Ruilong Li**, Xin Dong, Zixi Cai, Dingcheng Yang, Haozhi Huang, Song-Hai Zhang, Paul L. Rosin, Shi-Min Hu. Pose2Seg: Human Instance Segmentation Without Detection. *Tech report, arXiv 2018*.
- Fang-Lue Zhang, Xian Wu, **RuiLong Li**, Zhao-Heng Zheng, Jue Wang, Shi-Min Hu. Detecting and Removing Visual Distractors for Video Aesthetic Enhancement. *IEEE Transactions on Multimedia(TMM) 2018*
- Xijin Zhang, **Ruilong Li**, Song-Hai Zhang. Fast Portrait Automatic Segmentation with Coarse-to-Fine CNNs. *Visual Computing for Industry, Biomedicine and Art, 2017*
- **Ruilong Li**, Yuan Liang, Song-Hai Zhang. Cartoon Animations Segmentation and Vectorization Based on Canny Optimization. *Computer Science 2017 (in Chinese)*

### **Awards**

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- 2017 Sixth place in AIChallenger human pose estimation competition. (182 teams, nationwide)
- 2016 Three times of ‘The best employee of the week’ in DeepGlint Company.
- 2015 Postgraduate recommendation.
- 2014 Kwang-Hua Scholarship in Tsinghua University.

### **Personal skills**

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Skilled Knowledge: C++, Python, Matlab

Basic Knowledge: JavaScript, Html, CSS, Linux

Techniques: OpenGL, OpenCV, Pytorch, Caffe, Tensorflow

### **English level**

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Toefl 96 (Reading 28 Listening 25 Speaking 19 Writing 24)