

# Guanying CHEN

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## CONTACT INFORMATION

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## RESEARCH INTERESTS

Computer Vision, Machine Learning, and Graphics for Vision.

## EDUCATION

### The University of Hong Kong (HKU)

Hong Kong SAR, China

Ph.D. Student, Computer Science

Sept 2016 - Present

- Supervisor: Prof. Kenneth K. Y. Wong

### Sun Yat-Sen University (SYSU)

Guangzhou, China

B.Eng. Automation

Sept 2012 - Jun 2016

- GPA: 4.2 / 5.0 (Top 1%)

## PUBLICATIONS

[Peer-reviewed Papers]

2. **Guanying Chen**, Kai Han, Kwan-Yee K. Wong, *PS-FCN: A Flexible Learning Framework for Photometric Stereo*, European Conference on Computer Vision (**ECCV**), Munich, Germany, 2018.
1. **Guanying Chen\***, Kai Han\*, Kwan-Yee K. Wong, *TOM-Net: Learning Transparent Object Matting from a Single Image*, IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Salt Lake City, USA, 2018 (Spotlight Presentation). (\* equal contribution).

## RESEARCH EXPERIENCE

### SenseTime Group Limited

Shenzhen, China

Computer Vision Intern Researcher

Jun 2016 - Aug 2016

- **Project: Proposal-Based Indoor Object Detection**
- In this project, we aimed at implementing an indoor object detector for indoor robot navigation, following the idea of Faster R-CNN. We scraped indoor images from search engines and organized people to label the ground truth bounding box. To increase the robustness of the Faster R-CNN, we enhanced the model with Online Hard Example Mining (OHEM). At the end of the internship, the trained object detector was encapsulated in an Android SDK.
- Supervisor: Dr. Wei Zhang and Dr. Yu Lu

### Intelligent Media Computing Laboratory (SYSU),

Guangzhou, China

Undergraduate Research Assistant

Oct 2015 - May 2016

- **Project: Semantic Image Segmentation with Deep Neural Network**
- Semantic image segmentation is a high level vision task which relies on both local and context information. In this project, we proposed a novel deep learning framework to simultaneously utilize the powerful feature extraction capacity of CNN and context modeling ability of LSTM. The proposed model achieved promising results on the Pascal VOC benchmark.
- Supervisor: Prof. Liang Lin

### Dept. of Computer Science, The University of Hong Kong

Hong Kong SAR, China

Summer Research Intern

Jul 2015 - Aug 2015

- **Project: Scene Text Recognition with Deep Convolutional network**
- In this project, we reproduced the state-of-art results achieved by the CNN based text recognition algorithm. The model was trained on synthetic data and validated on the challenging real data. Our implementation was based on Caffe.
- Supervisor: Prof. Kenneth K. Y. Wong

TEACHING  
EXPERIENCE

**Department of Computer Science, The University of Hong Kong**

*Teaching Assistant*

- COMP7404 Computational Intelligence and Machine Learning 2016 - 2017 Fall

TECHNICAL SKILLS

- Programming Language: C/C++, Python, Lua, Matlab, Shell, C#, etc;
- Programming Environment: Linux + Vim + Tmux + Git + Makefile + Pdb/Gdb + SSH;
- Tools: PyTorch, Torch7, Caffe, Mitsuba, POV-Ray, Opencv, libsvm, Meshlab, L<sup>A</sup>T<sub>E</sub>X, etc;
- Language: Mandarin and Cantonese (native speaker), English (working proficiency).

AWARDS

- University Postgraduate Fellowship (UPF) HKU (2016-2020)
- Postgraduate Scholarship (PGS) HKU (2016-2020)
- Outstanding Graduate SYSU (2016)
- Outstanding Student Scholarship SYSU (2013, 2014, 2015)