

Yikang LI

PHD CANDIDATE IN COMPUTER VISION · PHOTOGRAPHER · MARATHON RUNNER

SHB 304, CUHK, Shatin, Hong Kong SAR, China

☎(+852) 5647-7110 · (+86) 147-1537-8580 | ✉allen.li.thu@gmail.com | 🌐www.cvboy.com | 📷yikang-li | 📺yikang-li

“Make the change that you want to see in the world.”

Education

Department of Electronic Engineering, The Chinese University of Hong Kong

Hong Kong SAR

PH.D. CANDIDATE IN COMPUTER VISION AND MACHINE LEARNING

Aug. 2016 - present

- Supervised by Prof. Wang Xiaogang.
- Awardee of Hong Kong PhD Fellowship Scheme(HKPFPS).

Department of Electronic Engineering, Tsinghua University

Beijing, China

B.S. IN ELECTRONIC ENGINEERING & ECONOMICS (2nd major)

Aug. 2011 - July. 2016

- GPA: 92/100. Ranking: 1/18 or 8/181. National Scholarship awardee and Class monitor.
- The 2nd Major equipped me with economic thinking and the fundamental knowledge about finance, business and economics.

Telecommunications, University of New South Wales

Sydney, Australia

EXCHANGE STUDENT

July. 2013 - Nov. 2013

- National exchange scholarship awardee. Funded by State Scholarship Council(CSC).
- Supervised by Prof. Jayantha Katupitiya on the 4WD4WS Quadbike Project.

Research & Project

Factorizable Net: An Efficient Framework for Scene Graph Generation

Accepted by ECCV 2018

YIKANG LI, WANLI OUYANG, BOLEI ZHOU, JIANPING SHI, CHAO ZHANG, XIAOGANG WANG

Dec. 2017 - April. 2018

- A bottom-up clustering method is proposed to factorize the image into subgraphs. By sharing the region representations within the subgraph, our method could significantly reduce the redundant computation and accelerate the inference speed
- Experiments on Visual Relationship Detection and Visual Genome show our method outperforms the state-of-the-art method with significantly faster inference speed..

Visual Question Generation as Dual Task of Visual Question Answering

Spotlight of CVPR 2018

YIKANG LI, NAN DUAN, BOLEI ZHOU, XIAO CHU, WANLI OUYANG, XIAOGANG WANG, MING ZHOU

June. 2017 - Dec. 2017

- we propose an end-to-end unified framework, the Invertible Question Answering Network (iQAN), to leverage the complementary relations between questions and answers in images by jointly training the model on VQA and VQG tasks.
- Evaluated on the large scale visual question answering datasets CLEVR and VQA2, our iQAN improves the VQA accuracy over the baselines. We also show the dual learning framework of iQAN can be generalized to other VQA architectures and consistently bring improvements.

ICRA Mobile Manipulation Challenge 2017

Final List (5/13)

DELONG ZHU, TINGGUANG LI, YIKANG LI, JIN PAN, HU CHENG

Mar. 2017 - May. 2017

- The challenge is one of the four robot challenges held at the top conference of Automation and Robotics, ICRA.
- The team is challenged to develop a lightweight mobile manipulator that can autonomously pick, transport and stack building blocks. The final score are measured on the bases of completion time and assembly height, while meeting the specified weight and size constraints of the robot.
- Our team CUApes won the **5th place** out of the 13 teams from all over the world.

Scene Graph Generation from Objects, Phrases and Caption Regions

Accepted by ICCV 2017

YIKANG LI, WANLI OUYANG, XIAOGANG WANG, BOLEI ZHOU, KUN WANG

Jan. 2017 - April. 2017

- We benchmark the learned model on three tasks, and show the joint learning across three tasks with our proposed method can bring mutual improvements over previous models.
- Experimental results shows that our proposed model successfully leverage the complementary effect of different vision tasks. Particularly, on scene graph generation task, our proposed method outperforms the state-of-art method by 3.63%~4.31%

ViP-CNN: Visual Phrase Guided Convolutional Neural Network

Accepted by CVPR 2017

YIKANG LI, WANLI OUYANG, XIAOGANG WANG, XIAOOU TANG

Aug. 2016 - Dec. 2016

- We formulate the visual relationship detection as three inter-connected recognition problems and propose a Visual Phrase Guided Convolutional Neural Network (ViP-CNN) to address them simultaneously.
- Our proposed model outperforms the state-of-art method in both speed and accuracy.

Study of Deep-Learning-Based Video Object Detection

Outstanding Final-Year Project (10%)

YIKANG LI, SHENGJIN WANG

Feb. 2016 - Jun. 2016

- We propose an optical-based Faster R-CNN algorithm to train a convolutional neural network that can employ both temporal and spatial information simultaneously.
- Our proposed method significantly outperforms the state-of-art single-frame model.
- The thesis based on the project is awarded the Outstanding Undergraduate Graduate Thesis.

Scholarships, Honors & Awards

2017	Award of Excellence , Stars of Tomorrow Internship Program at Microsoft Research Asia	<i>Beijing, China</i>
2016	Hong Kong PhD Fellowship , about 230 awardees per year in Hong Kong	<i>Hong Kong</i>
2016	Outstanding Final-Year Project , Top 10% student in EE Department	<i>Beijing, China</i>
2013/14/15	ST Engineering Scholarship , Top 5% student in EE Department	<i>Singapore</i>
2014	National Scholarship , Top 1% student in EE Department	<i>Beijing, China</i>
2013	Integrated Excellence Scholarship , Excellence in study and extracurricular activities	<i>Beijing, China</i>
2013	Exchange Student Scholarship , National Excellent Undergraduate Exchange Scheme	<i>Sydney, Australia</i>
2012	Special Award , Tsinghua University 7th Automobile Design Competition	<i>Beijing, China</i>

Working Experience

Nimble VR, Facebook Reality Labs (FRL)

Sausalito CA, USA

RESEARCH INTERN

May. 2018 - Sep. 2018

- Mentored by Chris Twigg, Yuting YE and Lingling TAO.
- We focus on the Hand Tracking and Hand-Object Interaction (more information will be added after finishing the Internship).

Autonomous Driving Group, Sensesense Ltd.

Beijing, China

INTERN RESEARCHER

Jan. 2018 - Apr. 2018

- Focus on the research related to Autonomous Driving under the supervision of Jianping SHI.
- We explore the instance-segmentation-based method to detect the intersection boundary.

Natural Language Computing Group, Microsoft Research Asia (MSRA)

Beijing, China

RESEARCH INTERN

June. 2017 - Oct. 2017

- Supervised by Nan DUAN, in the area of Language and Vision.
- We explore the possibility to apply both NLP and CV techniques to do some interesting and promising works.
- Submit one paper about Visual Question Answering to CVPR-2018.

Object Detection Group, Sensesense Group Ltd.

Beijing, China

INTERN RESEARCHER

Dec. 2015 - July. 2016

- Follow the state-of-art research in the area of Machine Learning and Computer Vision.
- Object detection in videos: optimizing Faster R-CNN for videos by introducing optical flow to utilize the temporal information.

Visual Computing Group, Microsoft Research Asia (MSRA)

Beijing, China

RESEARCH INTERN

Jul. 2014 - May. 2015

- Supervised by Lead Researcher, Lu Yuan, in the area of Computational Photography on following two projects.
- **HDR automatic detection:** to help mobile phones detect whether the current scene is the HDR-scene using light-weight classifier. Evaluated on our collected data: 91.1% accuracy.
- **Burst HDR with Intelligent Capture:** we proposed a novel pipeline to recover the HDR image using burst-captured images with predicted exposure settings. 86% images are predicted with less than 0.5eV error, and 99% images with less than 1eV error

Selected Activities

2016-2018	Vice President of CUHK Postgraduate Hall Residents' Association , Organize a series of activities for Postgraduate Hall Residents.	<i>Hong Kong SAR</i>
Dec. 2016	Student Volunteer in Siggraph Asia , help to prepare for the conference and collaborate with the exhibitor to show the product.	<i>Macau SAR</i>
2013-2014	Activity Department Minister of Business Association of Tsinghua Entrepreneurial Students , Organize a series of talks and lectures for the Entrepreneurial students of Tsinghua.	<i>Beijing, China</i>
2012-2016	Senior volunteer of Disabled Federation of Haidian District , look after the disabled children and help the staff there every Saturday	<i>Beijing, China</i>