YI LI

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EDUCATIION

University of Washington *Sep. 2018 -*
Ph.D. student, advised by Prof. Dieter Fox
Paul G. Allen School of Computer Science and Engineering

Tsinghua University *Aug. 2014 - Jun. 2017*
Master of Science Summa Cum Lauda in Beijing
Department of Automation

Tsinghua University *Aug. 2010 - Jun. 2014*
Bachelor of Engineering GPA: 90/100 Rank: 17/155
Department of Automation

PUBLICATIONS

(* indicates equal contribution)

Xingyu Liu, Gu Wang, **Yi Li**, Xiangyang Ji
CATRE: Iterative Point Clouds Alignment for Category-level Object Pose Refinement
In *European Conference on Computer Vision (ECCV)*, 2022

Yi Li, Gu Wang, Xiangyang Ji, Yu Xiang, Dieter Fox
DeepIM: Deep Iterative Matching for Object Pose Estimation
In *International Journal of Computer Vision (IJCV)*, 2020
In *European Conference on Computer Vision (ECCV)*, 2018 (oral)

Jifeng Dai*, Haozhi Qi*, Yuwen Xiong*, **Yi Li***, Guodong Zhang*, Han Hu, Yichen Wei
Deformable Convolutional Networks
In *International Conference on Computer Vision (ICCV)*, 2017 (oral).

Yi Li*, Haozhi Qi*, Jifeng Dai, Xiangyang Ji, Yichen Wei
Fully Convolutional Instance-aware Semantic Segmentation
In *Computer Vision and Pattern Recognition (CVPR)*, 2017 (spotlight)

Jifeng Dai, **Yi Li**, Kaiming He, Jian Sun
R-fcn: Object detection via region-based fully convolutional networks
In *Advances in Neural Information Processing Systems(NIPS)*, 2016

Jifeng Dai, Kaiming He, **Yi Li**, Shaoqing Ren, Jian Sun
Instance-sensitive fully convolutional networks
In *European Conference on Computer Vision (ECCV)*, 2016

RESEARCH EXPERIENCE

Robotics and State Estimate Lab, University of Washington Sep. 2018 - Present
Research Assistant *supervised by Prof. Dieter Fox*

· Leading the perception team in Amazon-UW-Robotics-Manipulation-Research

The project aims to have a system to let a robot arm to pick products from amazon pods automatically.

The perception team aims to solve the following tasks: 1)identify and track the segmentation of each object given a sequence of images which are captured every time a human operator put an object

into the pod; 2)given the segmentation of one object, predict a valid grasping pose for the robot arm to pick.

· Research on unseen object detection, pose estimation and tracking

· Research on object pose estimation and tracking with only RGB images

DeepIM, a novel approach to refine object 6D pose estimation

DeepIM project page: https://rse-lab.cs.washington.edu/projects/deepim/

NVIDIA AI Robotics Research Lab Sep. 2021 - March. 2022
Research Intern *supervised by Dr. Arsalan Mousavian and Dr. Lucas Manuelli*

· General object embedding for multiple robotic manipulation tasks like grasping and pushing etc.

Introduce the idea of bipartite matching into grasp pose prediction to solve the problem that annotation only cover a subset of the whole solution space.

Visual Computing Group, Microsoft Research Asia Nov. 2015 - Jun. 2017
Research Intern *supervised by Dr. Jifeng Dai and Dr. Yichen Wei*

· Participated in developing Deformable Convolution Network accepted in ICCV 2017 (oral)

Propose a novel way to do roi-pooling method which can help the network better deal with the variance of scale and rotation of objects in images

Get the state-of-the-art performance in object detection and semantic segmentation

· Developed instance-aware segmentation framework FCIS accepted in CVPR 2017 (spotlight)

Pushed forward the state-of-the-art performance by at least 30 relative percent

Won the first prize in the MS COCO Object Detection(SEGM) Challenge 2016 by a large margin

· Participated in developing fast and accurate object detection method R-FCN accepted in NIPS 2016

Achieve competitive results on the PASCAL VOC dataset

· Participated in developing Instance FCN accepted in ECCV 2016

A novel method to generate instance-level segment candidates

AWARDS

Reviewer of AAAI, ICCV, CVPR, ECCV

Outstanding 2017 Master Thesis by Chinese Institute of Electronics (10 in China)

2017 Summa Cum Lauda in Beijing

Outstanding 2016 Intern in MSRA

1st Prize in MSCOCO 2016 Object Detection Challenge

2013 National Scholarship

SKILLS

Proficient in Python, Pytorch
Experience with TensorFlow, MxNet, Caffe, CUDA
Languages: Chinese (Native), English (Fluent)