

# Yang Yang

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## EDUCATION

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**Doctor of Philosophy, Computer Science** 2016 - Present

University of Minnesota (UMN), Minneapolis

Advisor: [Changhyun Choi](#) and [Hyun Soo Park](#)

GPA: 3.94/4.0

**Graduate student, Engineering Thermophysics** 2015 - 2016

Tsinghua University (THU), Beijing, China

**Bachelor of Engineering, Energy and Power Engineering** 2011 - 2015

Huazhong University of Science and Technology (HUST), Wuhan, China

GPA: 91.4/100

## PROFESSIONAL EXPERIENCE

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**Choice Robotics Lab, Minneapolis, MN** 02/2019 - Present

Research Assistant, Advisor: [Changhyun Choi](#)

- Ongoing project: interactive robotic grasping with vision-and-language reasoning
- Proposed a deep RL-based approach to target-oriented robotic manipulations
- Developed a 6-DoF robotic grasping system with reachability awareness

**Mitsubishi Electric Research Laboratories, Cambridge, MA** 05/2020 - 08/2020

Research Intern, Host: [Siddarth Jain](#)

- Project: computer vision for contact-rich robotic manipulation
- Built a hierarchical RL-based policy for goal-conditioned robotic pushing

**Multiple Autonomous Robotic Systems Lab, Minneapolis, MN** 09/2016 - 01/2019

Research Assistant, Advisor: [Sergios Roumeliotis](#)

- Researched multi-task learning on depth prediction and surface normal estimation
- Developed an attitude tracking system for gyro-less mobile devices

**Google Daydream, Mountain View, CA** 07/2018 - 08/2018

Visual-Inertial System Engineer, Supervisor: [Sergios Roumeliotis](#)

- Wrote a C++ visual RANSAC library for camera pose estimation
- Implemented an image selection algorithm based on multiple RANSAC's

## PUBLICATIONS

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**Yang Yang**, Yuanhao Liu, Hengyue Liang, Xibai Lou, Changhyun Choi, "Attribute-Based Robotic Grasping with One-Grasp Adaptation", submitted to IEEE International Conference on Robotics and Automation (ICRA) 2021 [[website](#)]

**Yang Yang**, Hengyue Liang, Changhyun Choi, "A Deep Learning Approach to Grasping the Invisible", IEEE Robotics and Automation Letters (RA-L), 2020 [[PDF](#),[website](#)]

Xibai Lou, **Yang Yang**, Changhyun Choi, "Learning to Generate 6-DoF Grasp Poses with Reachability Awareness", IEEE International Conference on Robotics and Automation (ICRA), 2020 [[PDF](#),[website](#)]

Tien Do, Leo Neira, **Yang Yang**, Sergios I. Roumeliotis, "Attitude Tracking from a Camera and an Accelerometer on Gyro-less Devices", International Symposium on Robotics Research (ISRR), 2019 [[PDF](#)]

## HONORS & AWARDS

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UMII-MnDRIVE Graduate Fellowship, UMN	2020
Departmental Fellowship, UMN	2016
Outstanding Graduate Award, HUST	2015
Pacemaker to Merit Student Finalist (university-wide highest honor), HUST	2014
National Scholarship, Ministry of Education of P.R. China	2012 - 2014
Merit Student, HUST	2012 - 2014

## SKILLS

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**Programming Languages:** C/C++, Python, C#, MATLAB

**Libraries:** scikit-learn, PyTorch, Tensorflow, OpenCV, ROS

**Tools:** Simulink, Unity, MuJoCo, Linux, CMake, Git,  $\LaTeX$

## PROFESSIONAL SERVICE

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Reviewer, IEEE International Conference on Robotics and Automation (ICRA) | 2020, 2021

Reviewer, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) | 2020

Reviewer, IEEE Robotics and Automation Letters (RA-L) | 2020

## TEACHING

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Teaching Assistant, [Computer Vision](#), UMN | Fall 2020

Teaching Assistant, Program Design and Development, UMN | Spring 2018