HONGTAO WEN

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 A425, Innovation Park Building, No.2 Linggong Road, Dalian, China

RESEARCH INTEREST

I work in the field of Robotics, Computer Vision and Deep Learning.
Currently, I focus on the following research topics:
- Robotic Perception
- Category-Level 6D Object Pose Estimation
- 6DoF Grasp Pose Estimation

EDUCATION

Dalian University of Technology - Supervisor: Prof. Yi Sun   *Sep. 2020 - Present*
M.S. Student in School of Information and Communication Engineering | Academic GPA 87.6/100

Dalian University of Technology   *Sep. 2016 - Jun. 2020*
Bachelor of Electronic Information Engineering | GPA 87.3/100, top 10%

PUBLICATIONS

[2] **Hongtao Wen***, Jianhang Yan*, Wanli Peng, Yi Sun. TransGrasp: Grasp Pose Estimation of a Category of Objects by Transferring Grasps from Only One Labeled Instance. *European Conference on Computer Vision (ECCV 2022)*

[1] Wanli Peng, Jianhang Yan, **Hongtao Wen**, Yi Sun. Self-Supervised Category-Level 6D Object Pose Estimation with Deep Implicit Shape Representation. *Thirty-sixth AAAI Conference on Artificial Intelligence (AAAI 2022)*

INTERNSHIP EXPERIENCE

Gongyuan Sanqian Technology Co., Ltd.   *Mar. 2022 - Jun. 2022*
AI Research Intern, developing defect detecting algorithms and deploying a cloud-based AI training system.

ACADEMIC PROJECTS

Vision-based Robot Grasping System - [Demo Video]   DLUT
Supervisor: Prof. Yi Sun   *Dec. 2021*
- Based on our proposed method of grasp pose estimation.
- Developed a robotic system where a robot outfitted with a depth camera autonomously grasps household objects.
- Permitted robots to perform grasping tasks efficiently and accurately.

Robot-assisted System Helping to Water Mobility-impaired Individuals - [Demo Video]   DLUT
Supervisor: Prof. Yi Sun   *Dec. 2021*
- Based on our proposed method of grasp pose estimation.
- Developed a simple but meaningful system to pass a bottle filled with water to help water mobility-impaired Individuals, leveraging off-the-shelf facial landmark detecting algorithm to locate the lip location of human.

OPEN-SOURCE PROJECTS

Vision-Based Robotic Grasping - [Link]
A continuously updated summary of papers related to vision-based grasping, where I help to write a convenient program to automatically download these papers without human interference.

Paddle ViT Tutorial - [Link]
The repository provides demonstration codes for researchers to implement Vision Transformer(ViT) using an industrial deep learning framework called PaddlePaddle step by step.

Paddle PiT - Champion on Research Re-implementation Challenge by PaddlePaddle - [Link]
An unofficial repository implemented by PaddlePaddle of *Rethinking Spatial Dimensions of Vision Transformers* which is a Pooling-based Vision Transformer (PiT).

Paddle GreedyHash - Champion on Research Re-implementation Challenge by PaddlePaddle - [Link]

An unofficial repository implemented by PaddlePaddle of *Greedy Hash: Towards Fast Optimization for Accurate Hash Coding in CNN* which aims to tackle the NP hard problem in Deep Hashing.

Paddle HashNet - Champion on Research Re-implementation Challenge by PaddlePaddle - [Link]

An unofficial repository implemented by PaddlePaddle of *HashNet: Deep Learning to Hash by Continuation* which is a novel deep architecture for deep learning to hash by continuation method with convergence guarantees.

SKILLS

- Excellent in project analysis, implementation and coordination.
- Language: Chinese (native proficiency) & English (proficiency, IELTS score 7.0).
- Programming language: Python, C++, C.
- In-depth knowledge of Robotics, Computer Vision and Deep Learning.
- Familiar with deep learning frameworks: PyTorch, PaddlePaddle.
- Familiar with the programming of robot ROS system.
- Self-motivated with passion for researches and technologies.

HONORS & AWARDS

Outstanding Graduate Student of DLUT	*2022*
First Prize Scholarship of DLUT	*2021, 2022*
Champion on 3 tracks of Research Re-implementation Challenge by PaddlePaddle	*2022*
Top 1% on 2 tracks of Challenge of Xunfei AI Recognition Algorithm	*2021*
Top 1% on 3 tracks of Challenge of Guangdong Intelligent Recognition Algorithm	*2021*
Top 1.5% on Guangdong Industrial Intelligent Manufacturing Innovation Contest	*2020*
Outstanding Graduate of Liaoning Province	*2020*
Outstanding Graduate of DLUT	*2020*
China Aerospace Science and Technology Corporation Scholarship	*2019*
Huawei Scholarship	*2018*
First Prize Scholarship of Lingshui	*2017*
Second Prize in Mathematics Competition of Dalian	*2017*
Outstanding Merit Student of DLUT	*2017, 2018, 2019*