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in Chang Di
○ Boese0601

Python
Matlab
Latex
C
Javascript

🎓 EDUCATION BACKGROUND

University of Southern California   2022.08 – Present

Doctor of Philosophy   Computer Science
Advised by: Prof.Mohammad Soleymani

Technical University of Munich   2021.09 – 2022.07

Bachelor of Science   Informatics
Advised by: M.Sc Aljaž Božic and Prof.Matthias Niessner
- Cumulative GPA : 1.4/1.0

Dalian University of Technology   2018.09 – 2021.08

B.Eng Electronic and Information Engineering, Expected to graduate in 2022.9
- Cumulative GPA : 91.5/100   3.93/4.0   ‖   Major GPA : 93.2/100   3.95/4.0

🖨 PUBLICATION

Di Chang, Aljaž Božic, Tong Zhang, Qingsong Yan, Yingcong Chen, Sabine Süsstrunk and Matthias Nießner*
"*RC-MVSNet: Unsupervised Multi-View Stereo with Neural Rendering*" Arxiv Preprint(Under Review), 2022

Zhenxing Mi, **Di Chang** and Dan Xu* "*Generalized Binary Search Network for Highly-Efficient Multi-View Stereo*" IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2022

👥 RESEARCH EXPERIENCE

Image Visual Representation Lab at EPFL   2022.1 – Present

Summer@EPFL Intern   Advisor: Dr.Tong Zhang and Prof.Sabine Süsstrunk

Ongoing Project: Self-supervised single view reconstruction
- Further improve the generalization of NeRF.
- Self-supervised single view 3D reconstruction in the wild.

Visual Computing and Artificial Intelligence Lab at TUM   2021.9 – 2022.3

Guided Research   Advisor: M.Sc Aljaž Božic   Examiner: Prof.Matthias Niessner

Completed Project: Unsupervised Multi-View-Stereo for 3D reconstruction
- To solve the incompleteness caused by occlusion from different viewing directions, we involve depth rendering consistency loss to learn the geometry feature close to the object surface.
- To alleviate the ambiguous supervision from photometric consistency, we use reference view synthesis loss to generate consistent supervision. 、
- To further improve the robustness to different depth ranges, we propose Gaussian-Uniform mixture sampling.
- This work is under review at ECCV2022

Multimeidia Lab(MMLab) at HKUST

Department of Computer Science and Engineering   2021.3 – 2021.11

Reasearch Assistant   Supervisor: Prof.Dan Xu

Completed Project: Multi-View-Stereo Depth Estimation with Quadratic Search

- We introduced quadratic search and self-pacing learning strategy in MVS Depth Estimation
- The proposed method model achieved state-of-art result in the DTU and Tankantemples Dataset without pretraining
- We design and successfully train a generalized binary search network with a padding operation and masked training.
- This work is accepted by CVPR2022

Intelligent Image Analysis and Understanding Lab(IIAU-Lab)

School of Information and Communication Engineering   2020.1 – Present

Research Assistant   Director: Prof.Huchuan Lu

IIAU Project:National Underwater Robot Professional Contest   2021.3 – 2021.6

Leader   Supervisor：Prof.Dong Wang
(IIAU-Lab Professor,Vice Dean of School of Information and Communication Engineering)

National competition jointly held by NSFC, Pengcheng laboratory and Zhanjiang Municipal government.

- Using CascadeRCNN+ResNext101+FPN as the basic framework with the Deformable Convolutional Network and Self-Attention Block instead of the common CNN
- Applying Mosaic,RandomRotate90°,etc. data augumentation technology to reduce network overfitting and improve model generalization ability
- Making improvement to the FPN and introducing global context and non-local information

Final Result：Optical Track B List: Map 56.35 Rank: 18/1058

Acoustic Track B List：Map 54.33 Rank：9/490

Technical Report:　"*CDNet is all you need, cascade dcn based underwater object detection rcnn*"

Di Chang Yifan Wang and Dong Wang, Heywhale National Underwater Robot Professional Contest April 30-May 27, 2021, Zhanjiang, China.

Note:This project is recognized by National Natural Foundation and deployed in the codebase of Pengcheng Laboratory to further contribute to the field of underwater image processing.

🏭 INTERNSHIP EXPERIENCE

Computer Vision Researcher   2021.4 – 2021.7

Part-time Intern   Hikvision,Vision&Graphic DUT-Hikvision Joint Lab

In charge of three sub-projects and algorithm deployment

- Optimize the current open-sourced State-of-art YoloV5m Network Struture(Speed part) and apply it to the working project.
- Training the fresh-graduate interns at the company and offer necessary assistance.

Software Development Engineer   2020.6 – 2020.8

Full-time   Dalian Haosen Enterprise Smart Data,Technical Department

Provide form design and other page production for the company's web page, and make adjustments with the back-end interface

- Front-end web page constructing and designing the company's database system.(Framework:React)
- Participating in the development and design of new IOS applications

⚙ Programming Skills

- Programming Language: Python == Matlab > Latex > Javascript == C
- Platform: Linux(Ubuntu,CentOS),Windows,MacOS
- Framework: Keras(TensorFlow),PyTorch,Jittor

♡ Honors and awards

DUT Outstanding Undergraduate Scholarship	2021
DUT Innovation and Technology Scholarship	2021
DAAD Scholarship for TUMexchange students	2021
HKUST Summer Research Fellowship for visiting intern	2021
ICM/MCM,*Honourable Mention*	2021
National Underwater Robot Object Detection Competition,Optical Track *Finalist*	2021
National Underwater Robot Object Detection Competition,Acoustic Track *Third Prize*	2021
China National Scholarship	2020
DUT Outstanding Undergraduate Scholarship	2020
China Undergraduate Mathematical Contest in Modeling,*Second Prize*	2020
Dalian University of Technology AI Challenge,Object Detection,*Second Place in the university*	2020
DUT Outstanding Undergraduate Scholarship	2019
DUT NOK-Enterprise Scholarship	2019
34th National Olympiad in Physics (34th NOP) ,*First Prize in Liaoning Province,Rank:18*	2017

📕 Teaching

Tutor - *IN2346 Introduction to Deep Learning*	2021 Winter
Hiwi - *IN2346 Introduction to Deep Learning*	2021 Winter

ℹ Language ability

- English – C2: IELTS 8.0 (8.0/9.0/7.5/7.0)
- German – B2: TestDaf 14/20 (4/4/3/3)