

Yan Hao

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Education

ETH Zürich, Switzerland *September 2020 - now*
Master's degree in Computer Science (Computer Vision, Machine Learning) *GPA: 5.07/6.0*

Shanghai Jiao Tong University, China *September 2016 - June 2020*
Bachelor's degree in Computer Science, ACM Honor Class, Zhiyuan College *GPA: 3.65/4.3*

Publications & Manuscripts

Source Free Domain Adaptation for Object Detection applied to Road Scene Understanding *In submission*
*Yan Hao**, Florent Forest*, Olga Fink

Nothing Stands Still: A Spatiotemporal Benchmark on 3D Point Cloud Registration Under Large Geometric and Temporal Change *CVPR 2023 DEMO, Arxiv, In submission*
Tao Sun, Yan Hao, Shengyu Huang, Silvio Savarese, Konrad Schindler, Marc Pollefeys, Iro Armeni

3D Objectness Estimation via Bottom-up Regret Grouping *Arxiv*
Zelin Ye, Yan Hao, Liang Xu, Rui Zhu, Cewu Lu

Predicate-Aware Learning Network for Visual Relationship Recognition *ICME, Oral*
Liang Xu, Yong-Lu Li, Mingyang Chen, Yan Hao, Cewu Lu

Visual Rhythm Prediction with Feature-Aligned Network *MVA 2019*
Yutong Xie, Haiyang Wang, Yan Hao, Zihao Xu

Work Experience

Amazon AWS Shanghai AI Lab *June 2020 - September 2020*
Research Intern [Code] [Report] *Shanghai, China*

- Implement a previous **3D Point Cloud** learning algorithm “Grid-GCN” to the codebase *Deep Graph Library*.
- Transfer the deep learning library of the implementation from Mxnet to **Pytorch**.
- Accelerate the speed of training 3 times faster compared to the initial implementation.

Project Experience

Intelligent Maintenance and Operations Systems, EPFL *November 2022 - June 2023*
Master Thesis, advised by Prof. Dr. Olga Fink, Dr. Florent Forest *Lausanne, Switzerland*

- A new source-free **domain adaptation** method for **object detection** applied to road scene understanding.
- Implementation bases on **Detectron2** and **Pytorch**. Achieve **state-of-the-art** results for the adaptation from Cityscapes to Cityscapes Foggy and from Sim10k to Cityscapes.

3D Vision, ETH *May 2021 - June 2023*
Research Project, advised by Dr. Iro Armeni *Zürich, Switzerland*

- Propose a new spatiotemporal dataset and benchmark called **NSS (Nothing Stands Still)** on 3D point cloud registration under large geometric change across temporal stages. Accepted at **CVPR 2023 DEMO**.
- Use **Blender** and conduct high-quality visualizations on the proposed dataset and benchmark.
- Implement a brand-new **VR application** on **Meta Guest Pro** using **Unity** and enable realistic interaction for users with the 3D scenes.

Machine Vision and Intelligence Group, SJTU *July 2018 - March 2019*
Research Project, advised by Prof. Dr. Cewu Lu *Shanghai, China*

- Proposed a robust 3D objectness estimation method in a bottom-up manner, and achieved state-of-the-art 3D objectness methods with a small number of proposals in two difficult datasets, GMU-kitchen and CTD.

Technical Skills

Python, C++, Java, JavaScript, Pytorch, Tensorflow, 3D Vision, Detectron2, OpenCV, Domain Adaptation, Object Detection, Object Segmentation, Unity, VR, Blender, React.