

## HANZHE HU

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### EDUCATION BACKGROUND

09/2015-07/2019	Department of Physics (Elite program),	Nanjing University, Nanjing, China
09/2019-07/2022	Department of Machine Intelligence, School of EECS	Peking University, Beijing, China

### RESEARCH INTEREST

Computer Vision, Machine Learning, Reinforcement Learning, Quantum Computation

### AWARDS/HONORS/SCHOLARSHIPS/MEMBERSHIP

10/2016	Xingquan Zeren Scholarship	2500 CHY	20%
10/2016	Renmin Scholarship	2000 CHY	20%
04/2017	Mathematical Contest in Modeling(MCM) USA	Honorable	
10/2017	Renmin Scholarship	600CHY	
11/2017	University Physics Experiment Contest(Jiangsu Province)	Second	Prize
11/2018	Renmin Scholarship	600CHY	
09/2019	Xueye Scholarship	23000CHY	

### RESEARCH EXPERIENCES

➤ Dec. 2017- Mar. 2018 Department of Computer Science, Nanjing University  
Advisor: Prof. Yang Yu State Key Laboratory for Novel Software Technology

#### **Research on Zeroth-order Optimization**

- Our research is based on the python packages: ZOOpt and ZOOSrv(a distributed version of ZOOpt), the main aim is to accomplish comparative experiments with other packages used for optimization including CMA-ES and BayesOpt. Comparative experiments are designed to compare efficiency of optimization on testing functions such as sphere function and ackley function and on clustering and classification.

➤ Feb. 2019-Nov.2019 SenseTime Group Research Institute  
Advisor: Wei Wu

#### **Research on lane-line semantic and instance segmentation**

- In smart city project, lane-line detection is important for anomaly detection such as breaking traffic rules. Currently, we implement the state-of-art semantic segmentation network including Deeplab v3+ and PSPNet, and perform Meanshift clustering algorithm as a post-processing method to obtain the instance segmentation result. Moreover, our method achieves the state-of-art result on Tusimple lane detection benchmark dataset.

➤ Jun. 2019-Dec.2019 SenseTime Group Research Institute & Peking University  
Advisor: Dr. Weihao Gan

#### **Class-wise Dynamic Graph Convolution for Semantic Segmentation**

- Recent work has made great progress in semantic segmentation by exploiting contextual information in a local or global manner with dilated convolutions, pyramid pooling or self-attention mechanism. In order to avoid problematic contextual information aggregation in previous work, we proposed a class-wise dynamic graph convolution(CDGC) module to adaptively propagate information. Our proposed framework achieves the state-of-art performance on three popular benchmark datasets: Cityscapes, Pascal Voc2012 and COCO Stuff. Our paper is under review in CVPR2020.

### INTERNSHIP EXPERIENCE

Feb. 2019-Present. SenseTime Group Research Institute

### PROFESSIONAL SKILLS

Programming Language: C/C++, Python,SQL

Deep Learning Framework: Pytorch, Tensorflow

Computing Software: Matlab, Mathematica, Origin, Rev9