# Haidong ZHU

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# EDUCATION

• Tsinghua University

Beijing, Tsinghua

B.E. in Electronic Information Science and Technology; GPA: 3.62

Aug. 2015 - June. 2019 (expected)

• Harvard University

Visiting Student and Research Assistant

Cambridge, MA Jun. 2018 - Sept. 2018

# SKILLS

- Programming Skills: C/C++, MATLAB, Python, Git, Matlab, Verilog
- Deep Learning Frameworks: Caffe, PyTorch, TensorFlow, Keras

#### Manuscripts

- Yueqi Duan, Haidong Zhu, Chaojian Li, Jiwen Lu, and Jie Zhou, Unsupervised 3D Feature Learning by Point Cloud Completion, Submitted to IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2019
- Brian Matejek, Daniel Haehn, Haidong Zhu, Donglai Wei, Toufiq Parag, and Hanspeter Pfister, Biologically-Constrained Graphs for Global Connectomics Reconstruction, Submitted to IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2019
- Wenzhao Zheng, Jiwen Lu, Zhaodong Chen, Haidong Zhu, and Jie Zhou, Hardness-Aware Deep Metric Learning, Submitted to Neural Information Processing Systems (NIPS), 2018

# RESEARCH PROJECTS

• i-Vision Group, Tsinghua University

Beijing, China

Advisor: Prof. Jiwen Lu

Feb. 2018 - present

- o Metric Learning: Employed hardness-aware strategy to improve efficiency and result of metric learning
- 3D Vision: Investigated point cloud completion and autoencoder framework for 3D reconstruction task
- Self-supervised Learning: Employed self-supervision strategy as pretext for 3D point cloud classification
- Visual Computing Group, Harvard University

Cambridge, MA

Advisor: Prof. Hanspeter Pfister

Jun. 2018 - Sept. 2018

- o 3D segmentation: Improved the 3D segmentation pipeline for connectomic projects and generated state-of-the-art result on the same quality of affinities compared with present methods, got 3<sup>rd</sup> place on SNEMI3D public dataset
- o Graphs Reconstruction: Set up graph improvement step for error correction in connectomic segmentation
- Information Cognition and Intelligent System Lab, Tsinghua University

Beijing, China

Advisor: Prof. Jiansheng Chen

Jun. 2017 - Jan. 2018

- Liveness Detection System: Embedded the liveness detection strategy on mobile chips and systems
- o Big Data System: Set up the human identity system for huge information management and relation prediction
- Image Caption: Studied the overfitting cases in image captioning models

### Projects

- Structural Relational Reasoning for Point Clouds: Introduced structural relational network (SRN) for reasoning
- Competition and Lecture Management System: Lecture management system with wechat and website version
- Video-audio Similarity Evaluation System: Evaluating similarity between given audio and visual fragments
- Online Big Data Face Recognition System: Real time face recognition with big data management

#### Awards and Honors

Scholarship for Academic Excellence	2018
3rd Place in SNEMI3D Challenge	2018
Scholarship for Social Practice Excellence	2016/2017
Scholarship for Voluntary and Public Excellence	2016
2nd Prize in Tsinghua Volunteer Activity	2016