Haidong Zhu

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Education

- **Tsinghua University** — Beijing, Tsinghua
  B.E. in Electrical Information Science and Technology; GPA: 3.62 — *Aug. 2015 – June. 2019 (expected)*
- **Harvard University** — Cambridge, MA
  Visiting Student and Research Assistant — *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 Advances in Neural Information Processing Systems (NIPS), 2018*

Research Projects

- **i-Vision Group**, Tsinghua University — Beijing, China
  Research Assistant — *Feb. 2018 - present*
  - **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 vision task improvement
- **Visual Computing Group**, Harvard University — Cambridge, MA
  Research Assistant — *Jun. 2018 - Sept. 2018*
  - **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^{rd} place on SNEMI3D public dataset
  - **Graphs Reconstruction**: Set up graph improvement step for error correction in connectomic segmentation
- **Information Cognition and Intelligent System Lab**, Tsinghua University — Beijing, China
  Research Assistant — *Jun. 2017 - Jan. 2018*
  - **Liveness Detection System**: Embedded the liveness detection strategy on mobile chips and systems
  - **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
3rd Prize for the 32rd National Undergraduate Physics Olympic 2016