Weijian Xu

Contact Information

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Research Interests

Deep Learning and Computer Vision

Education

University of California San Diego, La Jolla, CA **2018-Present**
Ph.D. in Computer Science
- Advisor: Zhuowen Tu

University of California San Diego, La Jolla, CA **2016-2018**
M.S. in Computer Science
- Overall GPA: 3.97/4.00
- AI track GPA: 4.00/4.00

Beihang University, Beijing, China **2012-2016**
B.E. in Computer Science
- Selected into Honors College
- Overall GPA: 3.88/4.00

Research Experience

Facebook AI Applied Research, Menlo Park, CA **2019**
Research Intern, Mentor: Tamara Berg
Developed a robust fashion representation for instance retrieval task by restoring deformed instances and masking occluded features.

Microsoft Research Asia, Beijing, China **2018**
Research Intern, Mentor: Jingdong Wang
Developed a few-shot learning algorithm by applying task-dependent disentangled feature transformation into feature embedding.

University of California San Diego, La Jolla, CA **2017-2019**
Graduate Research Assistant, Mentor: Zhuowen Tu
- Developed a geometry-aware skeleton detection method with a weighted Hausdorff distance and a geometrically weighted cross-entropy loss. This work is accepted by BMVC 2019.
- Developed the Wasserstein introspective neural network and applied it to 2D and 3D generative models. Related works are accepted by CVPR 2018 and AAAI 2019.

Tsinghua University, Beijing, China **2015-2016**
Undergraduate Research Assistant, Mentor: Jiwu Shu
Developed a distributed in-memory file system with non-volatile memory and RDMA support.

Publications

6. **Weijian Xu**, Gaurav Parmar and Zhuowen Tu. Geometry-Aware End-to-End Skeleton Detection. In *British Machine Vision Conference* (BMVC), 2019.

5. Wenlong Huang*, Brian Lai*, **Weijian Xu** and Zhuowen Tu. 3D Volumetric Modeling with Introspective Neural Networks. In *the Thirty-Third AAAI Conference on Artificial Intelligence* (AAAI), 2019.

4. Kwonjoon Lee, **Weijian Xu**, Fan Fan and Zhuowen Tu. Wasserstein Introspective Neural Networks. In *IEEE/CVF Computer Vision and Pattern Recognition* (CVPR), 2018 (**Oral**).

3. **Weijian Xu** and Jingdong Wang. Task-Dependent Disentangled Feature Transformation for Few-shot Learning. In submission.

2. Yuezhou Sun, Haoming Zhang, **Weijian Xu**, Heidi Cheng, Raimondas Kiveris, Feng Han and Zhuowen Tu. Detecting Line Segments as Objects. In submission.

1. Zheng Ding, Yifan Xu, **Weijian Xu**, Gaurav Parmar, Yang Yang, Max Welling and Zhuowen Tu. Guided Variational Auto-Encoder for Disentanglement Learning. In submission.

Awards

GSA Travel Grant in UC San Diego	**2018**
National Scholarship of China	**2015**
Run Corporation Scholarship	**2015**
Honorable Prize in the Interdisciplinary Contest in Modeling	**2015**
First Prize Scholarship for Freshman in Beihang University	**2012**

Teaching Experience

Teaching Assistant, University of California San Diego — **Spring 2019**
COGS 181 - Neural Networks and Deep Learning

Teaching Assistant, University of California San Diego — **Winter 2018**
COGS 118A - Introduction to Machine Learning I

Professional Activity

Reviewer:

- IEEE/CVF Conference on Computer Vision and Pattern Recognition **2020**
- AAAI Conference on Artificial Intelligence **2020**
- IEEE/CVF International Conference on Computer Vision **2019**
- IEEE/CVF Conference on Computer Vision and Pattern Recognition **2019**

Misc.

Languages and Frameworks: Python, C/C++, PyTorch, TensorFlow.

Development Environment: Linux/Unix, macOS and Windows.

Fluent in English and Chinese.