Haonan Chen

Personal Data

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Education

University of North Carolina, Chapel Hill (Aug 2017-present)
Ph.D. in Department of Computer Science,
Advisor: Prof. Ron Alterovitz

Tsinghua University (Aug 2013 - Jul 2017)
Bachelor of Engineering, Dept. of Automation
Thesis: Merging Lane Group Decision Making Based on Vehicle Infrastructure Cooperation
Gpa: 88.77/100 Ranking: 17/139

Research Experience

Sept 2017 – Present | Research Assistant | **University of North Carolina at Chapel Hill**
Commonsense Reasoning Robot | Advisor: Prof. Ron Alterovitz and Prof. Mohit Bansal

- Use language model to learn commonsense knowledge from large unlabelled corpus with application on robot manipulation tasks.

Jun 2017 – Sept 2016 | Research Intern | **Megvii Inc. (Face $^{++}$)**, Beijing, China
Person Re-identification in surveillance video

- Propose to use pre-trained ResNet on person attribute task and transfer to person re-identification.
- The model achieves state-of-the-art result on serval public person re-id datasets.

Jun-Sept. 2016 | Summer intern | **University of Michigan**
Long- time Domain Representation of Video and its Application in Video Description Generation Task | Advisor: Prof. Jason Corso

- Implement various video description generation model with attention mechanism, based on NeuralTalk2 in Torch framework.
- Experiment on multiple datasets, including MSR-VTT, Tumblr GIF, etc.
- Maintain project page, set up http server and update the backend to the newest model we have.

Feb-Jun 2016	Research assistant | **Tsinghua Univerisy** *Dense Optical Flow Estimation with Motion Vector for the Application of Real-Time Action Recognition* | Advisor: Prof. Xiangyang Ji

- Using motion vector and other information to extract feature from original video flow, rather than decoding the video and calculating optical flow, which will extremely speed up action recognition process.
- Using frame glimpses and reinforcement learning method to train a model to decide which should be the next observation frame automatically, which will achieve time-invariance in action recognition process.
- Using attention based model to accurately locate the action so as to treat the detail of action better.

Publication

Qiqi Xiao, Kelei Cao, **Haonan Chen**, Fangyue Peng, Chi Zhang. *Cross Domain Knowledge Transfer for Person Re-identification.* arXiv preprint arXiv:1611.06026, 2016. [pdf]

Scholarships and Certificates

Apr 2016	MCM/ICM 2016, Meritorious Winner
2015	University Scholarship of Tsinghua for Outstanding Artistic Performance
2014, 2015	University Scholarship of Tsinghua for Outstanding Academic Performance

Programming Skills

Basic skill:	Python, C/C++, Java, Linux, LaTeX
Deep learning:	PyTorch

Interests and Activities

Open-Source, Programming
Music, Piano, Trombone, Symphony band