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EDUCATION

University of North Carolina, Chapel Hill Ph.D in Computer Science, Advisor: Tamara L. Berg	<i>Fall 2014 - Spring 2019</i>
Georgia Institute of Technology M.S in Electrical and Computer Engineering	<i>Fall 2011 - Spring 2014</i>
Shanghai Jiao Tong University B.S & M.S in Information Engineering	<i>Fall 2007 - Spring 2014</i>

WORK EXPERIENCE

Facebook AI, Research Scientist (Full-time)	<i>2020.03 - Now</i>
Microsoft, Researcher (Full-time)	<i>2019.07 - 2020.03</i>
Facebook AI Research (Summer Internship)	<i>2018.05 - 2018.08</i>
Adobe Research (Summer Internship)	<i>2017.05 - 2017.08</i>
eBay Research (Summer Internship)	<i>2016.05 - 2016.08</i>

RESEARCH INTEREST

Computer Vision, Natural Language Processing

PUBLICATION

- Linjie Li*, Yen-Chun Chen*, Yu Cheng, Zhe Gan, **Licheng Yu**, Jingjing Liu, “HERO: Hierarchical Encoder for Video+Language Omni-representation Pre-training”, in arxiv:2005.00200 (* denotes equal contribution).
- Jize Cao, Zhe Gan, Yu Cheng, **Licheng Yu**, Yen-Chun Chen, Jingjing Liu, “Behind the Scene: Revealing the Secrets of Pre-trained Vision-and-Language Models”, in ECCV 2020 (spotlight).
- Yen-Chun Chen*, Linjie Li*, **Licheng Yu***, Ahmed El Kholy, Faisal Ahmed, Zhe Gan, Yu Cheng, Jingjing Liu, “UNITER: Learning Universal Image-Text Representations”, in ECCV 2020 (* denotes equal contribution).
- Jie Lei, **Licheng Yu**, Tamara L. Berg, Mohit Bansal, “TVR: A Large-Scale Dataset for Video-Subtitle Moment Retrieval”, in ECCV 2020.
- Jie Lei, **Licheng Yu**, Tamara L. Berg, Mohit Bansal, “TVQA+: Spatio-Temporal Grounding for Video Question Answering”, in ACL 2020.
- Yandong Li, Yu Cheng, Zhe Gan, **Licheng Yu**, Liqiang Wang, Jingjing Liu, “BachGAN: High-Resolution Image Synthesis from Salient Object Layout”, in CVPR 2020.
- Jingzhou Liu, Wenhui Chen, Yu Cheng, Zhe Gan, **Licheng Yu**, Yiming Yang, Jingjing Liu, “VIOLIN: A Large-Scale Dataset for Video-and-Language Inference”, in CVPR 2020.
- Licheng Yu**, Xinlei Chen, Georgia Gkioxari, Mohit Bansal, Tamara L. Berg, Dhruv Batra, “Multi-target Embodied Question Answering”, in CVPR 2019.
- Hao Tan, **Licheng Yu**, Mohit Bansal, “Learning to Navigate Unseen Environments: Back Translation with Environmental Dropout”, in NAACL 2019. (Rank 1 on VLN Leaderboard)

10. Jie Lei, **Licheng Yu**, Mohit Bansal, Tamara L. Berg, “TVQA: Localized Compositional Video Question Answering”, in EMNLP 2018 (oral).
11. **Licheng Yu**, Zhe Lin, Xiaohui Shen, Jimei Yang, Xin Lu, Mohit Bansal, Tamara L. Berg, “MAttNet: Modular Attention Network for Referring Expression Comprehension”, in CVPR 2018.
12. Anja Belz, TL Berg, **Licheng Yu**, “From image to language and back again”, in JNLE 2018.
13. **Licheng Yu**, Mohit Bansal, Tamara L. Berg, “ Hierarchically-Attentive RNN for Album Summarization and Storytelling”, in EMNLP 2017.
14. **Licheng Yu**, Hao Tan, Mohit Bansal, Tamara L. Berg, “A Joint Speaker-Listener-Reinforcer Model for referring expressions.”, in CVPR 2017 (spotlight).
15. Hongteng Xu, **Licheng Yu**, Mark Davenport, Hongyuan Zha, “A unified framework for manifold landmarking”, in IEEE Transactions on Signal Processing, 2018
16. **Licheng Yu**, Patrick Poirson, Shan Yang, Alexander C. Berg, Tamara L. Berg, “Modeling Context in Referring Expressions”, in ECCV, 2016 (Spotlight)
17. Shan Yang, Zherong Pan, Tanya Ambert, Ke Wang, **Licheng Yu**, Tamara L. Berg, Ming C. Lin, “Detailed Garment Recovery from a Single-View Image”, in ACM Transactions on Graphics 2017
18. **Licheng Yu**, Eunbyung Park, Alexander C. Berg, Tamara L. Berg, “Visual Madlibs: Fill-in-the-Blank Description Generation and Question Answering”, in ICCV, 2015
19. Yi Xu, **Licheng Yu**, Hongteng Xu, Truong Nguyen, “Vector Sparse Representation of Color Image Using Quaternion Matrix Analysis.” in IEEE Transactions on Image Processing (TIP), 2015
20. **Licheng Yu***, Hongteng Xu*, Hongyuan Zha, Yi Xu. “Dictionary Learning with Mutually Reinforcing Group-Graph Structures.” in AAAI, 2015. (* denotes equal contribution)
21. **Licheng Yu**, Yi Xu, Hongteng Xu, Hao Zhang, “Quaternion-based Sparse Representation of Color Image.” in ICME, 2013 (Oral)
22. **Licheng Yu**, Yi Xu, Hongteng Xu, “Self-Example Based Super-resolution with Fractal-based Gradient Enhancement.” in ICME workshop, 2013
23. **Licheng Yu**, Yi Xu, Bo Zhang, “Single Image Super-resolution via Phase Congruency Analysis.” in VCIP, 2013 (Oral)
24. **Licheng Yu**, Hongteng Xu, Yi Xu, Xiaokang Yang, “Robust Single Image Super-resolution based on Gradient Enhancement”, in Special Sessions of APSIPA 2012

RESEARCH EXPERIENCE

UNC-Chapel Hill, Research Assistant	July 2015 - Now
Question Answering, Grounding, and Generation for Vision and Language	
GeorgiaTech, Visiting Scholar	June 2013 - December 2014
Semi-supervised structured dictionary learning	
QualComm (Shanghai), Research Student	February 2012 - April 2013
Real-time video super-resolution synthesis	
Shanghai Jiao Tong University, Research Assistant	October 2011 - October 2013
Quaternion-based sparse representation model for color images	

SKILLS

Programming Python, C/C++, Lua, Matlab, Java, Javascript
Framework PyTorch, TensorFlow, Torch7, Caffe