Jia-Sen Lu

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Education

2015 - Now **Ph.D Computer Engineering**, *Virginia Tech*, Advisor: Prof. Devi Parikh.

2013 - 2015 **M.S. Computer Science**, *University at Buffalo, The State University of New York*, Advisor: Prof. Jason Corso.

2009 - 2013 **B.E. Electrical Engineering**, *Nanjing University of Posts and Telecommunications (NUPT), Nanjing, China.*

Research Interest

My research interests mainly in **Computer Vision, , Natural Language Processing and Deep Learning**

Selected Publication

[1] **Lu, J.**, Yang, J., Batra, D., Parikh, D. "Hierarchical Question-Image Co-Attention for Visual Question Answering" (NIPS 2016)

[2] Antol, S., Agrawal, A., **Lu, J.**, Mitchell, M., Batra, D., Zitnick, C. L., Parikh, D. "VQA: Visual Question Answering." (ICCV 2015)

[3] **Lu, J.**, Xu, R. , Corso, J.J., "Human Action Segmentation With Hierarchical Supervoxel Consistency." (CVPR 2015)

[4] Xu, R., **Lu, J.**, Xiong, C. and Corso, J. J., "Improving Word Representations via Global Visual Context." (NIPS 2014 workshop)

Academic Experience

Aug.,2015-Now **Graduate Research Assistant**, Directed by Professor Devi Parikh.

May.,2014-Sept.,2015 **Summer Research Project**, Directed by Professor Jason Corso.

Graduate Projects

Feb. 2016 - May. 2016 **Hierarchical Question-Image Co-Attention for Visual Question Answering**.

- Proposed a novel co-attention mechanism for VQA that jointly performs question-guided visual attention and image-guided question attention.
- Propose a hierarchical architecture to represent the question, and consequently construct image-question co-attention maps at 3 different levels: word level, phrase level and question level.

Aug. 2015 - Dec. 2015 **VQA: Visual Question Answering**.

- Proposed and implement the baseline model for Visual Question Answering.

Aug. 2014 - Nov. 2014 **Human Action Segmentation With Hierarchical Supervoxel Consistency**.

- Proposed a hierarchical MRF model to bridge low-level video fragments with high-level human motion and appearance.
- Developed a new robust motion feature as unary potentials.
- Got significant improvement on actioness, action localization and action recognition.

Aug. 2014 - Oct. 2014 **Improving Word Representations via Global Visual Context**.

- Presented a new distributed word learning framework jointly learns word representation, image representation and language models.
- applied a data set that contains 1 million image-sentence pairs for training and the evaluation on word similarity demonstrates our model outperforms linguistic model without global visual context.

Work Experience

Jun. 2016 - Aug. 2016 **Research Intern at MetaMind**, *Palo Alto, CA, USA*.

- Worked on vision and language research task such as image caption, visual story telling
- Developed novel image caption method which is better than state-of-the-art results.

Sep. 2015 - Dec. 2015 **Teaching Assistant**, *Bradley Department of Electrical and Computer Engineering, Virginia Tech*.

- Teaching Assistant for ECE 5554 Computer Vision
- Responsibilities included prepare and grade the homework, office hour etc.

Professional Activities

reviewer **Neural Information Processing Systems**, *NIPS 2016*.

Co-oganizer **Visual Question Answering Workshop**, *CVPR 2016*.

Student Volunteer **CVPR 2015**.

Skills

OS Linux, Windows, Mac os

Programming C, C++, Python, Lua

Scientific Matlab, R, Torch, Caffe

Typography LaTeX, MS Office

Standardized Tests

GRE, V:151, Q:165, AW:3.0.

TOEFL, 95(R:24, L:27, S:23, W:21).