

## EDUCATION

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- **University of Illinois, Urbana-Champaign**

*Ph.D.*

*Dec. 2015 - Present*

- **Research Interests:** Machine Learning, Graphical Models and Computer Vision: Using generative and discriminative models for language vision tasks. Applying techniques learnt from spin model physics to computer vision problems.

Advisor: Prof. Alexander Schwing

- **University of Illinois, Urbana-Champaign**

*Master of Science in Physics; GPA: 3.80*

*Aug. 2013 - Dec 2015*

- Research in computational condensed matter physics. Advisor: Prof. Bryan Clark.

## PUBLICATIONS

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- **Sequential Latent Spaces for Modeling the Intention During Diverse Image Captioning:** Jyoti Aneja\*, Harsh Agrawal\*, Dhruv Batra, Alexander Schwing. *Accepted at ICCV 2019*
- **1<sup>st</sup> Runner-up in the Text-VQA Challenge-2019:** Harsh Agrawal, Jyoti Aneja, Maghav Kumar, Alexander Schwing. *Organized at the VQA Workshop at CVPR 2019*
- **Fast, Diverse and Accurate Image Captioning Guided By Part-of-Speech:** Aditya Deshpande\*, Jyoti Aneja\*, Liwei Wang, Alexander Schwing, David Forsyth. *Accepted at CVPR 2019 [ORAL]*
- **Convolutional Image Captioning:** Jyoti Aneja\*, Aditya Deshpande\*, Alexander Schwing; Conference on Computer Vision and Pattern Recognition, CVPR 2018.
- **Gauge Symmetry of the 2 Dimensional Quantum Spin Liquid in Quantum Kagome Ice:** Jyoti Aneja, Bryan Clark; International Summer School on Computational Quantum Materials 2016 -University of Sherbrooke
- **Negative Ion Rich Plasmas in Continuous and Pulsed Wave Modes in a Minimum-B Magnetic Field:** Debaprasad Sahu, Shail Pandey Jyoti Aneja, Sudeep Bhattacharjee; American Institute of Physics-Physics of Plasmas  
\* : equal contribution

## INDUSTRY EXPERIENCE

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- **Microsoft Research**

Redmond, WA

*Summer Internship*

*May 2019 - Aug 2019*

- **Captioning in the Wild:** Working on developing image captioning models that can describe scenes and objects that were not seen during training. Mentor: Dr. Neel Joshi, Dr. Besmira Nushi, Dr.Kenneth Tran, Dr. Hamid Palangi

- **Snap Research**

Los Angeles, CA

*Summer Internship*

*May 2018 - Aug 2018*

- **Captioning and Graph Convolutions:** Worked on using graph convolution networks to improve diversity in current captioning models. Mentors: Dr. Ning Zhang, Ziyu Zhang

## AWARDS AND RECOGNITION

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- **Session Chair:** Applied Machine Learning, CSL Student Conference, UIUC-2019
- **Departmental Travel Awards:** Awarded thrice. Once to present CS paper at CVPR-2018 and twice for presenting physics research at Princeton University and University of Sherbrooke, Canada.
- **Excellent TA - UIUC:** Awarded several times for CS and Physics courses
- **Academic Excellence award:** Best Graduating Student, IIT-Kanpur.
- **DST-DfG award:** Awarded by the Department of Science And Technology, Government of India and German Research Foundation, selected for participating in meeting of The Nobel Laureates Students at Lindau, Germany.

## TEACHING

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- **Teaching Assistant - CS:** Machine Learning, Applied Machine Learning, Numerical Methods, Data Structures  
Assisted in creating theory and coding assignments. Conducted weekly office hours to help students with home works and concepts.
- **Teaching Assistant - Physics:** Classical Mechanics, Quantum Mechanics, Electrodynamics, Statistical Physics.  
Conducted weekly office hours involving blackboard teaching and tutorial sessions.