Kaustav Kundu

Contact Information	Webpage:	http://www.cs.toronto.edu/~kkundu/
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Research Interests

Computer Vision, Machine Learning, Scene Understanding, Image Recognition

Education

University of Toronto, Toronto, ON, Canada

Ph.D., Computer Vision and Machine Learning, *Expected:* December 2017

- Thesis Topic: *Searching in 3D for Scene Understanding*
- Advisors: Raquel Urtasun and Sanja Fidler

Toyota Technological Institute at Chicago, Chicago, IL, USA

M.S., Computer Vision and Machine Learning, December 2013

- Research Topic: *3D Scene Understanding*
- Advisors: Raquel Urtasun and Sanja Fidler

International Institute of Information Technology, Hyderabad, TN, India

B.Tech.(Hons.), Computer Vision, May 2012

- Research Topic: *Visualization of Community Photo Collections using 3D Point Clouds*
- Advisor: P J Narayanan

Research Experience

Research Assistant Jan 2014 to present
University of Toronto
Supervisors: Raquel Urtasun and Sanja Fidler

Research Assistant September 2012 to December 2013
University of Toronto
Supervisors: Raquel Urtasun and Sanja Fidler

Research Assistant May 2010 - May 2012
International Institute of Information Technology, Hyderabad
Supervisor: P J Narayanan

Publications

1. Xiaozhi Chen*, **Kaustav Kundu***, Yukun Zhu, Andrew Berneshawi, Huimin Ma, Sanja Fidler, Raquel Urtasun, *'3D Object Proposals using Stereo Imagery for Accurate Object Class Detection'*, In *Transactions on Pattern Analysis and Machine Intelligence* (PAMI), *2017*
2. Lluis Castrejón, **Kaustav Kundu**, Raquel Urtasun, Sanja Fidler, *'Annotating Object Instances with a Polygon-RNN'*, In *IEEE Conference in Computer Vision and Pattern Recognition* (CVPR), *2017* (oral presentation)
3. Min Bai*, Wenjie Luo*, **Kaustav Kundu**, Raquel Urtasun, *'Exploiting Semantic Information and Deep Matching for Optical Flow'*, In *European Conference on Computer Vision* (ECCV), *2016*
4. Xiaozhi Chen, **Kaustav Kundu**, Ziyu Zhang, Huimin Ma, Sanja Fidler, Raquel Urtasun, *'Monocular 3D Object Detection for Autonomous Driving'*, In *IEEE Conference in Computer Vision and Pattern Recognition* (CVPR), *2016*
5. Xiaozhi Chen*, **Kaustav Kundu***, Yukun Zhu, Andrew Berneshawi, Huimin Ma, Sanja Fidler, Raquel Urtasun, *'3D Object Proposals for Accurate Object Class Detection'*, In *Neural Information Processing Systems* (NIPS), *2015*

6. Chenxi Liu*, Alexander G. Schwing*, **Kaustav Kundu**, Raquel Urtasun, Sanja Fidler, *'Rent3D: Floor-Plan Priors for Monocular Layout Estimation'*, In *IEEE Conference in Computer Vision and Pattern Recognition* (CVPR), *2015* (oral presentation)

7. Aditya Deshpande, Siddharth Choudhary, P J Narayanan, Krishna Kumar Singh, **Kaustav Kundu**, Aditya Singh, Apurva Kumar, *'Geometry Directed Browser For Personal Photographs'*, In *Indian Conference on Vision, Graphics and Image Processing* (ICVGIP), *2012* (oral presentation)

** indicates equal contribution*

Internships

- Apple Inc. — June 2016 - September 2016
  Mentors: Charlie Tang and Ruslan Salakhutdinov
- Apple Inc. — May 2015 - August 2015
  Mentor: Bart Nabbe

Teaching Experience

Teaching Assistant	University of Toronto
Inference Algorithms and Machine Learning	Spring 2017
Intro to Machine Learning	Fall 2016
Probabilistic Graphical Models	Spring 2016
Neural Networks	Spring 2015
Intro to Image Understanding	Fall 2014, 2015
Intro to Visual Understanding	Spring 2014
Mathematical Expression and Reasoning in Computer Science	Summer 2014
Teaching Assistant	IIIT Hyderabad
IT Workshop II	Spring 2012
IT Workshop I and Computer Programming	Fall 2011
Digital Signal Analysis and Applications	Spring 2011
Mathematics I	Fall 2010

Graduate Courses

Computer Graphics/Vision
- Intro to Computer Vision
- Visual Recognition with Text
- Deep Learning in Computer Vision

Machine Learning
- Intro to Statistical Machine Learning
- Probabilistic Graphical Models

Optimization
- Linear Programming
- Convex Optimization

Others
- Mathematical Foundation
- Mathematical Toolkit
- Algorithms
- Computatational Linguistics