Harsh Agrawal

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Education

Virginia Tech   *Blacksburg, VA*
M.S. in Computer Engineering   *2014 - 2010*
Advisor: Dr. Dhruv Batra

Delhi Technological University (Formely Delhi College of Engineering)   *Delhi, VA*
B.Eng. in Computer Engineering   *2010 - 2014*

Publications

1. **Sort Story: Sorting Jumbled Images and Captions into Stories**
   Harsh Agrawal*, Arjun Chandrasekaran*, Dhruv Batra, Devi Parikh, Mohit Bansal
   Empirical Methods in Natural Language Processing (EMNLP) 2016

2. **Human Attention in Visual Question Answering: Do Humans and Deep Networks Look at the Same Regions?**
   A. Das*, H. Agrawal*, C.L. Zitnick, D. Parikh, D. Batra
   Computer Vision and Image Understanding (CVIU) 2017
   Empirical Methods in Natural Language Processing (EMNLP) 2016
   ICML 2016 Workshop on Visualization for Deep Learning, **Best Student Paper Award**

3. **Object-Proposal Evaluation Protocol is 'Gameable'**
   Neelima Chavali*, Harsh Agrawal*, Aroma Mahendru*, Dhruv Batra
   Computer Vision and Pattern Recognition (CVPR) 2016, **Spotlight**

4. **CloudCV: Large Scale Distributed Computer Vision as a Cloud Service**
   Harsh Agrawal, Clint Solomon Mathialagan, Yash Goyal, Neelima Chavali, Prakriti Banik, Akrit Mohapatra, Ahmed Osman, Dhruv Batra
   Book Chapter: Mobile Cloud Visual Media Computing, 265-290

Experience

Research Engineer   *Venice, CA*
Snap, Inc   *July 2016 – Present*

- Applying machine learning & computer vision to develop the next generation of camera products and creative tools

Organization Administrator
Google Summer of Code (GSOC)   *2015 - 2017*

- Actively maintain and manage a community of more than 50 contributors to develop **CloudCV**: An open source platform for reproducible research
- Mentored more than 10 undergraduate students during GSOC - one of the most prestegious open source program sponsored by Google - to contribute to CloudCV

Software Engineering Intern   *Redmond, WA*
Microsoft   *June 2015 – August 2015*

- Applied machine learning methods for automating certain workflows in the sales lifecycle.

Graduate Research Assitant
Blacksburg, VA

Machine Learning & Perception Lab
August 2014 - May 2016

- Working on problems at the intersection of computer vision, language modelling. Focussed on interpretability, and incorporating common sense in models

Unmanned Aerial Systems Lab, Delhi Technological University
Delhi, India

Ungraduate Researcher - Computer Vision
Oct. 2010 - Dec., 2013

- Performed autonomous extraction and segmentation of objects from aerial imagery in natural scenes for Student UAS Competition.
- Developed a robust, user-friendly GUI on Qt to control camera properties and process the imagery feed acquired wirelessly.

Extracirricular Activities

- Gave a talk on "Object Proposals: Biases in Evaluation Protocol" at Mid-Atlantic Computer Vision Workshop, 2015 held at UNC, Chapel Hill.
- Attended a workshop at GraphLab in June 2014 to learn about GraphLab Create.
- Co-presented CloudCV in the NVIDIA GPU Express Webinar. There were almost 250 registrations for the talk.
- Presented a poster on CloudCV at NVIDIA GTC 2015.
- Attended MHacks - a 48 hour hackathon organised by University of Michigan attended by 1000+ students. Designed and prototyped "Noteworthy": a note sharing social network app.
- Demonstrated CloudCV project at Computer Vision for Patter Recognition Conference (CVPR,2014), one of the most prestegious Computer Science conference.

Honors & Awards

2015	**$10000 worth of credits** from Amazon Web Services for CloudCV	
2015	**Winner of "Best use of Respoke API" prize** at AngelHack Seattle in June 2015. Designed a collaborative trip planning app which had a web, mobile and a phone app component in 24 hours.	*Seattle, USA*
2014	**3rd / 30+ teams at** 10th Annual Student Unmanned Aerial Systems Competition	*Baltimore, U.S.A*
2013	**2nd prize for Best Research Poster Award** at Microsoft Research TechVista	*India*
2013	**1st Place in** technical paper presentation at annual technical fest "Sankalan" of Delhi University. Also won the Team Trophy for best team efforts and all round performances.	*Delhi, India*
2012	**4th / 30+ teams at** 10th Annual Student Unmanned Aerial Systems Competition	*Baltimore, U.S.A*

Selected Projects

EvalAI 👤 *40+*

evalai.cloudcv.org ⑂ *100+* ★ *330+* ❗ *1300+*

Open source platform that aims to help researchers, students & data scientists to host & participate in various AI challenges

Fabrik 👤 *12+*

fabrik.cloudcv.org ⑂ *83+* ★ *566+*

An online tool to collaboratively build, visualize, and design neural nets in the browser;

Origami 👤 *5+*

origami.cloudcv.org ⑂ *20+* ★ *30+*

An online platform for users to showcase and demo their latest models

CloudCV

👤 *10+*

🍴 *62+* ⭐ *95+*

Developing a cloud based service for providing large scale distributed computer vision algorithms like classification, feature extraction, object detection etc. based on GraphLab, OpenCV and other open source projects.