

# Shreyas Saxena

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📄 <https://github.com/shreyassaxena>

## Research Interests

Interested in data and method driven machine learning models for visual recognition and image understanding. Some current topics of interest include but not limited to: architecture learning for CNN, strategies to learn extremely deep neural networks, unsupervised learning, model compression.

## Education

- 2013–2016 **Doctor of Philosophy (Ph.D.) in Computer Science**, *INRIA-Grenoble*, France.
- 2012–2013 **Masters of Science (M.S) in Informatics**, *ENSIMAG*, France.  
Specialization: Graphics, Vision and Robotics
- 2008–2012 **Bachelor of Electrical Engineering**, *PEC University of Technology*, India.

## Publications

- [1] [S. Saxena](#), J. Verbeek. **Convolutional Neural Fabrics**. NIPS, Dec 2016, Barcelona, Spain.
- [2] [S. Saxena](#), J. Verbeek. **Heterogeneous Face Recognition with CNNs**. ECCV Task-CV Workshop, Oct 2016, Amsterdam, Netherlands. (Spotlight)
- [3] [S. Saxena](#), J. Verbeek. **Coordinated Local Metric Learning**. ICCV ChaLearn Looking at People Workshop, Dec 2015, Santiago, Chile. (Oral)
- [4] [S. Saxena](#). **Significance of Dynamic Content of Gait Present in the Lower Silhouette Region**. Biometric Recognition, Dec 2011, Beijing, China. (Oral)

## Experience

### Research

- Sept 2013 – **PhD Student**, *LEAR, INRIA*, Grenoble, France.  
Dec 2016 *Learning representations for visual recognition*  
Advised by *Cordelia Schmid* and *Jakob Verbeek*  
Worked on architecture learning for CNN, large scale local metric learning for face verification and retrieval, and domain adaptation for heterogeneous face recognition.
- Mar – Sept 2013 **Master Research Internship**, *LEAR, INRIA*, Grenoble, France.  
*Metric learning for face verification*  
Advised by *Jakob Verbeek*  
Improved over the state-of-the-art in unsupervised face verification by evaluating design choices of LBP inspired hand-crafted feature descriptor. Explored metric learning configurations to obtain low-rank discriminative feature descriptor.

- Mar – Jul **Semester Research Internship**, *IRSEEM,ESIGELEC*, Rouen, France.  
 2011 *Feature Subset Selection for Model Free Gait Recognition (EU Project NOBA)*  
 Advised by *Xavier Savatier*  
 Studied the existing feature descriptors for performing gait recognition. Did feature selection over different feature spaces to obtain state-of-the art performance with a reduced computational overhead.
- Jul – Aug **Summer Internship**, *Indian Institute of Technology (IIT)*, Kanpur, India.  
 2010 *Human Identification with Gait Analysis*  
 Advised by Asst. Prof. Venkatesh K Subramanian  
 Implemented a baseline system for gait recognition.
- Miscellaneous**
- Oct 2016 **Attendee**, *Google Computer Vision Summit*, Zurich.  
 Selected among 60 Postdocs and PhD students.
- Dec 2014 – **Co-organizer**, *Datascience Meetup*, Grenoble, France.  
 current Involved in promoting and developing the data science community in Grenoble.  
 300+ members, 22+ meetups, 10+ industry sponsors.
- May 2014 **Attendee**, *Machine Learning Summer School (MLSS)*, Reykjavik, Iceland.  
 Aug 2013 **Volunteer**, *Computer Vision Machine Learning Summer School (CVML)*, Paris.

## Professional Service

### Journals

- IJCV16, International Journal of Computer Vision, **Reviewer**
- TIP16, Transactions on Image Processing, **Reviewer**
- JSTSP16, Journal of Selected Topics in Signal Processing, **Reviewer**
- PRL16, Pattern Recognition Letters, **Reviewer**
- SPL17, Signal Processing Letters, **Reviewer**

### Conferences

- NIPS16, Conference on Neural Information Processing Systems, **Reviewer**
- ISSPA12, International Conference on Information Science Signal Processing and their Applications, **Technical Program Committee Member**

## Awards and Honours

- 2016 NIPS travel award
- 2016 Invited for Google Computer Vision Summit
- 2011 Travel grant by PEC University to present paper
- 2011 Fellowship for semester exchange with IRSEEM, France
- 2008 22nd nationwide rank in National Science Olympiad, 12th Grade

## Computer Skills

- Basic CUDA, Javascript
- Intermediate C/C++, HTML, Git, Subversion (SVN), BLAS, Theano, Lasagne

Advanced Python, Matlab, Caffe, L<sup>A</sup>T<sub>E</sub>X