VARUN JAMPANI

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Objective

I would like to do pioneering work in the field of my interest and gain satisfaction. I would also like to benefit the organization providing me with such opportunities, society and environment; and thus making this world a better place.

Education

Max-Planck Institute for Intelligent Systems and **University of Tübingen**, Tübingen, Germany (Jan'13 – Dec'16)
Doctor of Philosophy (*PhD*) in computer vision and machine learning (***summa cum laude***)
Thesis Title: Learning Inference Models for Computer Vision

International Institute of Information Technology, Hyderabad (IIIT-H), India (July'09 - Dec '12)
Master of Science (*MS*) by Research in computer sciences
Thesis Title: A Study of X-ray Image Perception for Pneumoconiosis Detection

International Institute of Information Technology, Hyderabad (IIIT-H), India (July '05 – May '09)
Bachelor of Technology (*BTech*) with Honours in computer sciences (CGPA: **9.68/10.0**)
Gold Medalist and member of **Dean's list**[*] for all the semesters

Work Experience

Research Internships

- **Microsoft Research, Cambridge, UK**
  Research Intern (July'14 – Oct'14)
  Consensus message passing technique for making Infer.NET viable for solving vision problems.
- **Max Planck Institute for Intelligent Systems, Tübingen, Germany**
  Visiting Researcher (July'12 – Oct'12)
  Explored different ways of white balancing an image illuminated with multiple colored light sources.
- **Microsoft Research, Redmond, USA**
  Research Intern (Aug'09 – Oct'09)
  Developed novel interfaces for web image search results using Silverlight.
- **Microsoft Advanced Technology Labs, Cairo, Egypt**
  Research Assistant (April'12 – July'12)
  Developed an image classification system to index web images.
- **GE Global Research, Bengaluru, India**
  Research Intern (May'09 – July'09)
  Analyzed experimental data for our perception studies on Pneumoconiosis diagnosis.
- **Cognitive Sciences Lab, IIIT-Hyderabad, Hyderabad, India**
  Research Assistant (July'08 – Dec'08)
  Did experiments to test the usability of different pages on a famous Indian web portal.

Software Development

- **Crypsis Technologies, Hyderabad, India**
  Software Development Engineer (Aug '11 – Feb '12)
  Developed a web browser based service for mobile website testing using Objective C, Ruby etc…
- **Medical Imaging Solutions, Hyderabad, India**
  Software Development Engineer (Dec '10 – March '11)
  Developed a DICOM communications and download monitor tool using QT-C++

Teaching Experience

- **IIIT-Hyderabad, Hyderabad, India**
  Teaching Assistant for Computer Vision, Maths-1 and Maths-2 courses
  Involved in conducting tutorial sessions, problem solving sessions and some mid-term exams

[*] Dean's list comprises of all those students who show academic excellence in a particular semester.

- **Tibetan Children's Village, Dharamsala, India**
  Volunteer Teacher (Sept'10 – July'11)
  Taught Mathematics, Physics and Biology for class-IX, X and XI students

Achievements and Awards

- Recipient of **summa cum laude** (highest honors) from the University of Tübingen for my PhD dissertation on "Learning Inference Models for Computer Vision".
- Recipient of **Outstanding Reviewer Award** for my peer-reviewing work at ECCV'16.
- Recipient of **Gold Medal** for being first in my B.Tech. batch (out of around 180 students) at IIIT-Hyderabad.
- Recipient of prestigious **Pratibha Scholarship award** given by the state government of Andhra Pradesh.
- Secured All India Rank of **121** (out of over 700 thousand students) in All India Engineering Entrance Examination (AIEEE-05) and State Rank of **306** (out of over 150 thousand students) in Engineering, Agriculture and Medicine Common Entrance Test (EAMCET-05).
- Recipient of **CBSE Scholarship** for my university studies given by the central government of India.
- Recipient of **National merit scholarship** and **State merit scholarship** awards given by the central and state governments of India respectively for my academic performances in 10^{th} and 12^{th} standards.
- Selected as a member of **doctoral consortium** at CVPR, 2016.
- Selected as **one of the 50 finalists** from all over the India for **Reliance-Stanford scholarship 2011**.
- Selected by the **Ministry of Youth Affairs and Sports**, Government of India in 100-member **Youth delegation to China** (15th June '09 - 24th June '09).

Publications/Conferences/Tech. Reports

- **Video Propagation Networks**
  Jampani, V., Gadde, R., & Gehler, P. V.
  In *IEEE Conference on Computer Vision and Pattern Recognition*, CVPR (2017).
  URL: https://arxiv.org/pdf/1612.05478.pdf

- **Efficient 2D and 3D Facade Segmentation Using Auto-Context**
  Gadde, R.*, Jampani, V.*, Marlet, R., & Gehler, P. V. (*equal contribution)
  In Pattern Analysis and Machine Intelligence, T-PAMI (2017).
  URL: https://arxiv.org/pdf/1606.06437.pdf

- **Superpixel Convolutional Networks using Bilateral Inceptions**
  Gadde, R.*, Jampani, V.*, Kiefel, M., & Gehler, P. V. (*equal contribution)
  In European Conference on Computer Vision, ECCV (2016).
  URL: http://arxiv.org/pdf/1511.06739.pdf

- **Learning Sparse High Dimensional Filters: Image Filtering, Dense CRFs and Bilateral Neural Networks**
  Jampani, V., Kiefel, M., & Gehler, P. V.
  In *IEEE Conference on Computer Vision and Pattern Recognition*, CVPR (2016).
  URL: http://arxiv.org/pdf/1503.04949.pdf

- **Optical Flow with Semantic Segmentation and Localized Layers**
  Sevilla-Lara, L., Sun, D., Jampani, V., & Black, M. J.
  In *IEEE Conference on Computer Vision and Pattern Recognition*, CVPR (2016).
  URL: http://arxiv.org/pdf/1503.04949.pdf

- **Consensus Message Passing for Layered Graphical Models**
  Jampani, V.*, Eslami, S. M.*, Tarlow, D., Kohli, P., & Winn, J. (*equal contribution)
  In *Proceedings of the Eighteenth International Conference on Artificial Intelligence and Statistics*, JMLR Workshop and Conference Proceedings, volume 38, p. 425- 433 (2015, May).
  URL: http://arxiv.org/abs/1410.7452.pdf

- **The Informed Sampler: A Discriminative Approach to Bayesian Inference in Generative Computer Vision Models**
  Jampani, V., Nowozin, S., Loper, M., & Gehler, P. V.
  In Computer Vision and Image Understanding*, Special Issue on Generative Models in Computer Vision* (2015).
  URL: http://arxiv.org/pdf/1402.0859.pdf

- **Permutohedral Lattice CNNs**
  Kiefel, M., Jampani, V., Gehler, P. V.
  In *International Conference on Learning Representations Workshop*, (2015, May).

URL: http://arxiv.org/pdf/1412.6618.pdf

- **Efficient Façade Segmentation using Auto-Context**
  Jampani, V.*, Gadde, R.*, & Gehler, P. V. (*equal contribution)
  In *Proceedings of IEEE Winter Conference on Applications of Computer Vision (WACV),* p. 1038-1045 (2015, January).
  URL: *http://files.is.tue.mpg.de/vjampani/jampani15_wacv.pdf*

- **Assessment of Computational Visual Attention Models on Medical Images**
  Jampani, V., Ujjwal, Sivaswamy, J., & Vaidya, V.
  In *Proceedings of the Eighth Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP)*, p. 80, (2012, December).
  URL: http://dl.acm.org/citation.cfm?id=2425413

- **Effect of Expertise and Contralateral Symmetry on the Eye Movements of Observers while Diagnosing Pneumoconiosis**
  Jampani, V., Vaidya, V., Sivaswamy, J., Ajamba, P., & Tourani, K. L.
  In *XIV Medical Image Perception Society Conference* (Oral Presentation and MIPS Scholarship recipient), (2011, August).

- **Role of Expertise and Contralateral Symmetry in the Diagnosis of Pneumoconiosis: An Experimental Study**
  Jampani, V., Vaidya, V., Sivaswamy, J., & Tourani, K. L.
  In *Proc. of SPIE* (Vol. 7966, pp. 79661K1), (2011, March).
  URL: http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=1349984

- **ImageFlow: Streaming Image Search**
  Jampani, V., Ramos, G., & Drucker, S.
  Microsoft Research Technical Report (MSR-TR-2010-48), (2010, November).
  URL: http://research.microsoft.com/apps/pubs/default.aspx?id=141701
  Video: http://www.youtube.com/watch?v=ha0hm3qDhRM
  News: FastCompany - http://goo.gl/87cJZS , Inventing Interactive - http://goo.gl/0wcuQp

Talks

- **Inverting Graphic Engines using Informed Samplers,** IIIT-Hyderabad, Hyderabad, December, 2013.
- **Primed Message Passing for Layered Graphical Models,** Microsoft Research, Cambridge, October, 2014.
- **Learning to Propagate Information across Pixels,** Microsoft Research, Redmond, April, 2016.
- **Learning Bilateral Information Propagation across Pixels,** Nvidia Research, Santa Clara, June, 2016.

Peer Reviewing

I am a reviewer for the following conferences and journals: **CVPR** (2017), **NIPS** (2015, 2017), **ICCV** (2017), **ECCV** (2016), **ICML** (2017), **IMAVIS** (2017), **PAMI** (2015, 2016), **SIGGRAPH Asia** (2017).

Volunteering Experiences

Took one year break from studies and worked as a teacher at **Tibetan Children's Village**, Dharamsala, India from Sept'10 to July'11. While teaching, learnt some aspects of Tibetan culture such as basic language, cooking and dancing.

References

Available upon request.

Varun Jampani
June 2017