JAYANT THATTE | PH.D. | STANFORD UNIVERSITY

www.stanford.edu/~jayantt

🏠 *470 Anton Ct, Palo Alto, CA 94301* 📞 *+1-650-285-7024* ✉ *jayantt@stanford.edu*

Stanford Ph.D. graduate interested in computer vision, virtual reality, image processing

EDUCATION

***Stanford University**, Ph.D., Electrical Engineering* **(2014 – 2020)**

Research group: Image, Video and Multimedia Systems – *advisor*: Bernd Girod **GPA: 3.97/4.00**

Keywords: **virtual reality, computer vision, computer graphics, image processing**

- Developed an end-to-end cinematic virtual reality system to support real-time head-motion parallax
- Proposed novel scene representations for virtual reality; Designed, built, and calibrated a custom multi-camera system; Developed a real-time, OpenGL-based computer graphics renderer for Oculus Rift

***Indian Institute of Technology (IIT) Madras**, B.Tech and M.Tech, Electrical Engineering* **(2009 – 2014)**

Award: Graduated with Philips India Award for highest cumulative GPA in the graduating batch **GPA: 9.37/10.0**

PROFESSIONAL EXPERIENCE

Apple Inc., Cupertino *(Intern, Camera Engineering Group)* **(June – Sep 2016)**

Keywords: **Deep learning, computer vision, virtual reality**

Used a combination of convolutional neural networks and classical methods to design an algorithm for high-quality novel view synthesis for applications that have constraints on the available computational capacity

Barclays Bank PLC., Singapore *(Intern, Quantitative Analyst)* **(May – Jul 2013)**

Keywords: **machine learning, statistics, time-series analysis**

Developed high-frequency trading algorithms for predicting market movements, trade profitability, hedging strategies

ACADEMIC PROJECTS

Deep depth estimation from stereo imagery, (course project) **(Oct – Dec 2015)**

Keywords: **deep learning, computer vision, depth estimation**

Developed an algorithm to estimate dense depth from stereo images using a CNN-based 3D plane-sweep cost volume

Simultaneous Visual and Linguistic Embedding with CNN and T-LSTM, (course project) **(Apr – Jun 2015)**

Keywords: **deep learning, CNNs, LSTMs**

Used CNN and T-LSTM to extract visual and linguistic scene descriptor embeddings in a common vector space for the task of image-caption retrieval using MSCOCO and Flickr-16k datasets

SKILLS

Programming: Python, C++, MATLAB, Unity **GPU Programming**: OpenGL, CUDA **Deep Learning**: PyTorch

Relevant courses: deep learning (vision), deep learning (NLP), machine learning, AI, optimization, image processing

AWARDS

1. OPPO Distinguished Poster Award, 2020 SCIEN, "Cinematic Virtual Reality with Head-motion Parallax"
2. NVIDIA Best Poster Award, 2017 SCIEN, "Stacked OmniStereo for VR with Six Degrees of Freedom"
3. Best Paper for Industry Award for 2016 IEEE Signal Processing Society, at the Int. Conf. on Image Processing
4. Apple Inc. Best Poster Award, 2015 SCIEN, "Depth Augmented Stereo Panorama for Cinematic VR"
5. Philips India Award, batch of 2014 Highest graduating GPA, B.Tech-M.Tech, IIT Madras, India

FIRST-AUTHOR PUBLICATIONS

1. [Magazine] IEEE CG&A *"Real-world Virtual Reality with Head-motion Parallax" [submitted]*
2. IEEE VCIP 2019 *"A Statistical Model for Disocclusions in Depth-based Novel View Synthesis"*
3. [Workshop] ECCV 2018 *"Effect of Motion Parallax, Binocular Stereo on Viewer Preference, Size Perception in VR"*
4. Electronic Imaging 2018 *"Towards 6-DoF VR Rendering from Stacked OmniStereo Representation"*
5. IEEE VCIP 2017 *"Stacked Omnistereo for VR with Six Degrees of Freedom"*
6. IEEE ICIP 2016 *"Depth Augmented Stereo Panorama for Cinematic VR with Focus Cues"*
7. IEEE ICME 2016 *"Depth Augmented Stereo Panorama for Cinematic VR with Head-Motion Parallax"*