SHWETHA RAM

My interests are in solving the hard problems in Computer Vision, for which I've employed both classical and Machine Learning techniques. Looking for exciting opportunities to build technologies and experiences of the future.

SOME RECENT PROJECTS

- Deep Learning for View Synthesis: exploring learned representations for novel view synthesis to enable applications like AR and VR.
- Light Field Video Capture, Camera Array Calibration, 3D Reconstruction
- Captained team Eye2Eye (video conferencing with natural eye contact) that won multiple awards at Dolby IdeaQuest.
- Volumetric video formats that exploit content saliency and human perception. Proposed quality metrics for volumetric video.
- Neuron Segmentation from EM Images
- Depth Image based Rendering

MISCELLANEOUS

- Volunteer Member, San Jose Astronomy Association
- Volunteer, Greene Scholars Programme focused on increasing STEM engagement for African American youth
- Carnatic Vocalist

CONTACT

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WEBSITE: https://shwetharam0407.github.io/

EDUCATION

University of California Santa Barbara **2015 - 17**
M.S, Electrical and Computer Engineering
M.S Project: Retargeting Virtual Worlds
Advisor: Prof. Matthew Turk

National Institute of Technology Karnataka, Surathkal, India **2011 - 15**
B.Tech, Electrical and Electronics Engineering

WORK EXPERIENCE

Dolby Laboratories, Inc., Image Technology Incubation, Advanced Technology Group
Senior Software Dev – Image Tech R&D — Jan 19 – Present
Software Dev – Image Tech R&D — March 17 – Dec 18
Image Processing Intern — June – Dec 16

Working with an interdisciplinary team on solutions to capture, represent, transmit, render and display immersive content for applications like AR and VR. Exploring new opportunities for Dolby in this space.

UC Santa Barbara Department of Physics
Spring 2016
Teaching Assistant - PHY 127AL Analog Electronics

Indian Academy of Sciences - Summer Research Fellowship
Computer Vision and Artificial Intelligence Lab, Indian Institute of Science, May – July 2014
Advisor: Dr. K. R. Ramakrishnan
Built Projector-Camera display systems

Computer Vision and Artificial Intelligence Lab, IISc. – Summer Internship
May – July 13
Built a system that tracked the foot movements of a dancer using a KINECT and played back a suitable percussion sound.

SKILLS

C/C++, Python, Matlab, some Javascript. Tensorflow, Keras.

PATENTS

Multi-Resolution Multi-View Video Rendering, Lakshman, Haricharan, Jia, Wenhui, Chao, Jasper, Ram, Shwetha, Baricevic, Domagoj, Ninan, Ajit, U.S Patent 20200288114
Representing Volumetric Video in Saliency Video Streams, Ajit Ninan, Shwetha Ram, Gregory John Ward, Domagoj Baricevic, Vijay Kamarshi, Patent Application U.S. 63/039,589, European 20180178.4. Patent Pending.