

# Sreenivas Venkobarao

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## EDUCATION

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- **University of Massachusetts, Amherst** Amherst, MA  
*Master of Science in Computer Science* Sep 2017 – May 2019
  - **Masters Project:** Self Supervised Learning from Videos  
Advised by Prof. Erik Learned-Miller and Prof. Liangliang Cao
  - **Courses:** Computer Vision; Neural Networks; AI; Database Design & Implementation; **GPA:** 3.73 / 4.0
- **SSN College of Engineering, Anna University** Chennai, India  
*Bachelor of Engineering in Electronics and Communication Engineering* Jul. 2013 – Apr. 2017
  - **Courses:** Advanced Digital Signal Processing, Digital Image Processing, Computer Architecture, Computer Networks

## SKILLS

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- **Languages:** Python, MATLAB • **Software:** Git, Heroku, Blender • **Hardware:** Arduino
- **Frameworks:** PyTorch, Tensorflow, OpenCV, Open3D, Scikit-Learn, Keras

## WORK EXPERIENCE

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- **Xerox Palo Alto Research Center (Xerox PARC)** Palo Alto, CA  
*Interactions and Analytics Lab Intern* June 2018 - Sep 2018
  - Worked under Dr. Matthew Shreve, on building fast (and dense) annotation tools for 3D objects, and reconstructing 3D models of novel objects, using Augmented Reality.
- **Indria Labs (now Attentive.ai)** New Delhi, India  
*Computer Vision Intern* Jun 2016 - Jul 2016
  - Explored different methods for abandoned object recognition from CCTV surveillance footage. Built a dataset for luggage detection to train different Machine Learning algorithms. Gained exposure to Convolutional Neural Networks (CNNs), Online Learning, and Boosting algorithms.

## RESEARCH EXPERIENCE

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- **Computer Vision Lab, UMass Amherst** Amherst, MA  
*Camera Rotation Estimation from Optical Flow* Jan 2018 - May 2018
  - Worked under Professor Erik Learned-Miller on estimating camera rotation from a video sequence using optical flow. Implemented a novel technique to jointly align a sequence of images under camera rotation.
- **Learning Image Representations using Colorization as a Proxy Task**  
*Course Project, UMass Amherst* Oct 2017 - Dec 2017
  - Analyzed the effectiveness of self-supervised deep learning methods for the task of learning representations of images. Conceived and examined modifications to state of the art CNN architectures for image colorization.
- **Human Action Recognition from Videos**  
*Undergrad Project, SSN College of Engineering, Chennai* Dec 2016 - April 2017
  - Worked under Dr. N. Venkateswaran, on identifying actions from videos. Designed a novel feature descriptor leveraging neural networks and classical Computer Vision approaches, and inspected performance.

## PROJECTS

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- **RiskyClickerBot:** Python based content moderation system for Reddit, to detect harmful images and videos.
- **Rubik's Cube Solver:** Python program to generate optimal solutions given photos of the Rubik's cube.