

Suriya Narayanan Lakshmanan

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EDUCATION

CMU, ROBOTICS INSTITUTE
MASTER'S IN COMPUTER VISION
Dec 2018 | Pittsburgh, PA
Cum. GPA: 3.83/4.0

NIT, TIRUCHIRAPPALLI
BACHELOR OF TECHNOLOGY IN ELECTRICAL AND ELECTRONICS ENGINEERING
May 2014 | Tiruchirappalli, India
Cum. GPA: 8.8 / 10.0

COURSEWORK

Intro to Machine Learning
Intro to Computer Vision
Math fundamentals for Robotics
Visual Learning and Recognition
Deep Reinforcement Learning

Algorithms and Data Structures
Operating Systems
Object Oriented Programming
Digital Signal Processing

SKILLS

PROGRAMMING

C • C++ • Python • Matlab
• \LaTeX

LIBRARIES

TensorFlow • PyTorch • OpenCV •
Numpy • scikit-learn

OPERATING SYSTEMS

Linux • Windows • Android

OTHER SOFTWARE

Git • Microsoft Office • GIMP

EXPERIENCE

SAMSUNG RESEARCH AMERICA | COMPUTER VISION RESEARCH INTERN
May 2018 - August 2018 | Mountain View, USA

- Human Pose Estimation: Developed datasets for non-traditional inputs, finetuned Openpose and tracked people

TEXAS INSTRUMENTS | SOFTWARE ENGINEER

July 2014 - June 2017 | Bangalore, India

- Improved accuracy of TI CNN model for driver drowsiness detection by 2x
- Improved Adaboost classifier for object detection yielding 10% more true detections. [Efficient object detection and classification on low power embedded systems, ICCE 2017]
- Developed a set of Image Processing modules. [Understanding the Performance Benefit of Asynchronous Data Transfers, HiPC 2015]

TEXAS INSTRUMENTS | COMPUTER VISION INTERN

May 2013 - July 2013 | Bangalore, India

- Improved an existing homography based Ground Plane Detection by 10%. [Ground plane detection, Patent 2017]. [Improved ground plane detection in real time systems using homography, ICCE 2014]

ACADEMIC PROJECTS

WEAKLY SUPERVISED OBJECT DETECTION

March 2018 - March 2018 | CMU, Pittsburgh

Replicated a combination of papers on weak supervision based object detection

INTERSECTION RECONSTRUCTION FROM SINGLE STATIONARY CAMERA

January 2018 - May 2018 | CMU, Pittsburgh

Worked on reconstructing intersection from a single stationary camera using a combination of Deep Learning techniques, non-linear optimization and tracking

LEARNING HIERARCHICAL POLICIES IN DYNAMIC ENVIRONMENTS

March 2018 - May 2018 | CMU, Pittsburgh

Developed an RL agent that can quickly adapt to a dynamic environment with sparse reward

INTELLIGENT INPAINTING

October 2017 - November 2017 | CMU, Pittsburgh

Developed an application that removes a person from an image from a single click

NETWORK REGULARISATION FOR ALIGNED OBJECTS

September 2017 - October 2017 | CMU, Pittsburgh

Regularized deep networks using a developed technique that induces sparsity

AUGMENTED REALITY

September 2017 - October 2017 | CMU, Pittsburgh

Created an AR application from scratch on Matlab

PANORAMA

September 2017 - October 2017 | CMU, Pittsburgh

Developed code for panorama creation from scratch on Matlab

SCENE CLASSIFICATION

September 2017 | CMU, Pittsburgh

Performed scene classification using Spatial Pyramid Matching from scratch