

MANASI MUGLIKAR

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EDUCATION

Carnegie Mellon University

Master of Science in Electrical and Computer Engineering

Present

GPA: 3.92/ 4.00

Birla Institute of Technology and Science, Pilani

Bachelor of Engineering in Electrical and Electronics

July 2016

GPA: 3.93/ 4.00

TECHNICAL STRENGTHS

Programming Languages

Python, C++, MATLAB

Software & Tools/Libraries

Torch, Caffe, Tensorflow, OpenCV, OpenGL, LabView, Verilog

Design/Simulation Environments

LTSpice, Hspice, OrCAD, AutoCAD, Solidworks, LATEX

WORK EXPERIENCE

Illumination and Imaging Lab, USA

Computer Vision Research Intern

May 2017- Present

- Designed an imaging pipeline using Robot Operating System(ROS) for data collection using [Episcan](#). Performed visual odometry and SLAM using this sensor and designed adaptive dynamic range structured light systems. Involved sensor calibration and ground truth depth map data collection.
- Operated and designed real time system using ROS and C++.
- Executed data preprocessing, implemented new algorithms, models and carried out benchmarking and collected results of these datasets.

Nexustec GmbH, Germany

Software Development Intern

Jan 2016- June 2016

- Developed a Camera and Hardware system for Embedded Machine Vision Application using OpenCV library in C++.

Pupil Labs, Germany

Software Development Intern

Summer 2015

- Contributed to open source eye tracking platform by speeding up the algorithm (x2) using Cython compiler.

PROJECTS

Vision based eye-gaze tracking

Spring 2017

- Implemented a feature-based approach for eye center localization that can efficiently and accurately locate and track eye centers in low-resolution images and videos taken with a webcam using OpenCV library in C++.

Learning to map environments from raw images

Spring 2017

- Developed a method to directly train a network that maps first-person images to a 2D top-down occupancy grid around the robot's current position using Tensorflow.
- Used LSTM layer, allowing the network to make continuous free space estimates over a continuous trajectory.

Surface normal estimation

Spring 2017

- Implemented Convolutional Neural Network(CNN) architecture with Fully Connected Network(FCN) in Torch for surface normal estimation

Text Generation

Spring 2017

- Implemented Convolutional Neural Network(CNN) architecture with Fully Connected Network(FCN) in Torch for surface normal estimation

Diffusion Imaging

Fall 2014

- Used Higher Angular Resolution Diffusion Imaging (HARDI) to identify the accuracy of fiber tracts that can be reconstructed while adopting the clinical Diffusion Imaging.