MANASI MUGLIKAR

(+1) 412 587 2649 ⋄ manasimuglikar@cmu.edu
GitHub ⋄ LinkedIn

EDUCATION

Carnegie Mellon University *Present*
Master of Science in Electrical and Computer Engineering GPA: 3.92/ 4.00

Birla Institute of Technology and Science, Pilani *July 2016*
Bachelor of Engineering in Electrical and Electronics GPA: 3.93/ 4.00

TECHNICAL STRENGTHS

Programming Languages	Python, C/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 *Present*
Computer Vision Research Intern

- Designed an imaging pipeline using ROS for data collection using Episcan on a mobile robot. Performed visual odometry and SLAM using this sensor.
- Implemented ROS drivers for EpiToF sensor.

Nexustec GmbH *Spring 2016*
Research Intern

- Developed a Camera and Hardware system for Embedded Machine Vision Application.
- Interfaced two cameras with raspberry pi and used stereo vision algorithm to calculate the depth of the scene, using OpenCV library in C++ programming language

Pupil Labs *Summer 2015*
Intern

- 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.

Relighting Animated Eyes *Spring 2017*

- Used environment maps to render realistic animation eyes. Used Blender to render animated eyes in a scene.

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.

High Performance Ternary Adder using CNTFET *Fall 2014*

- Modeled Carbon Nanotube Field Effect Transistors(CNTFET) based multi valued logic half adder circuit design and simulated using HSPICE.
- High Performance Ternary Adder using CNTFET Paper Published in IEEE Transactions on Nanotechnology