# MANASI MUGLIKAR

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## 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

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|---|---|
| **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** *May 2017- Present*
*Computer Vision Research Intern*

· 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** *Jan 2016- June 2016*
*Software Development Intern*

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

**Pupil Labs, Germany** *May 2015- August 2015*
*Software Development 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*
*Carnegie Mellon University*

· 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*
*Carnegie Mellon University*

· 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*
*Carnegie Mellon University*

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

**Text Generation** *Spring 2017*
*Carnegie Mellon University*

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