

## Assignment 1

### Creating a occupancy map based on Lidar data

In this assignment, you need to do the following:

1. Lidar data along with vehicle GPS location will be given in ros bag file. Read the file and display the lidar scans
2. Using the scans create a occupancy grid where the value of the grid is either 0 or 1. A mechanism to do this is shown in Figure 1.
3. Create the map only for a specified region near the lidar as shown in Figure 2.

References:

<https://pdfs.semanticscholar.org/783a/911805ec8fa146ede0f29c4f8d90e42db509.pdf>

[http://wiki.ros.org/local\\_map](http://wiki.ros.org/local_map)

<http://pointclouds.org/media/>

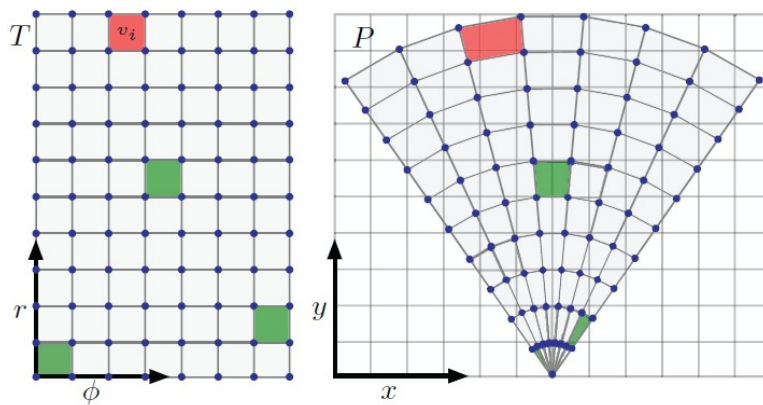


Figure 1: Creating the occupancy grid

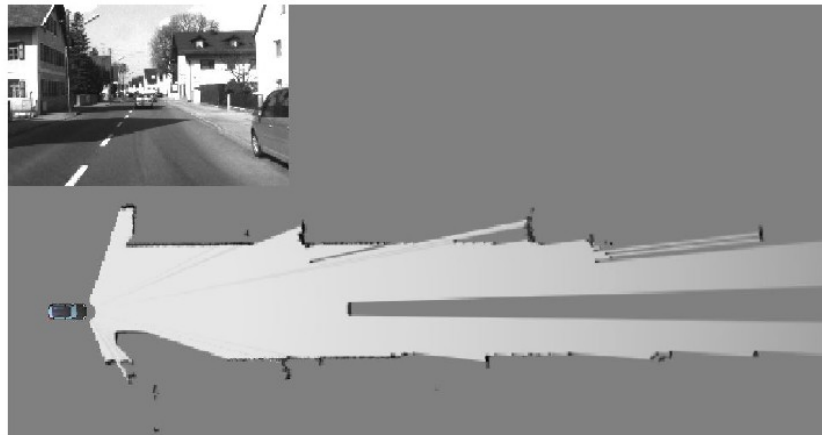


Figure 2: Occupancy grid of a specific region