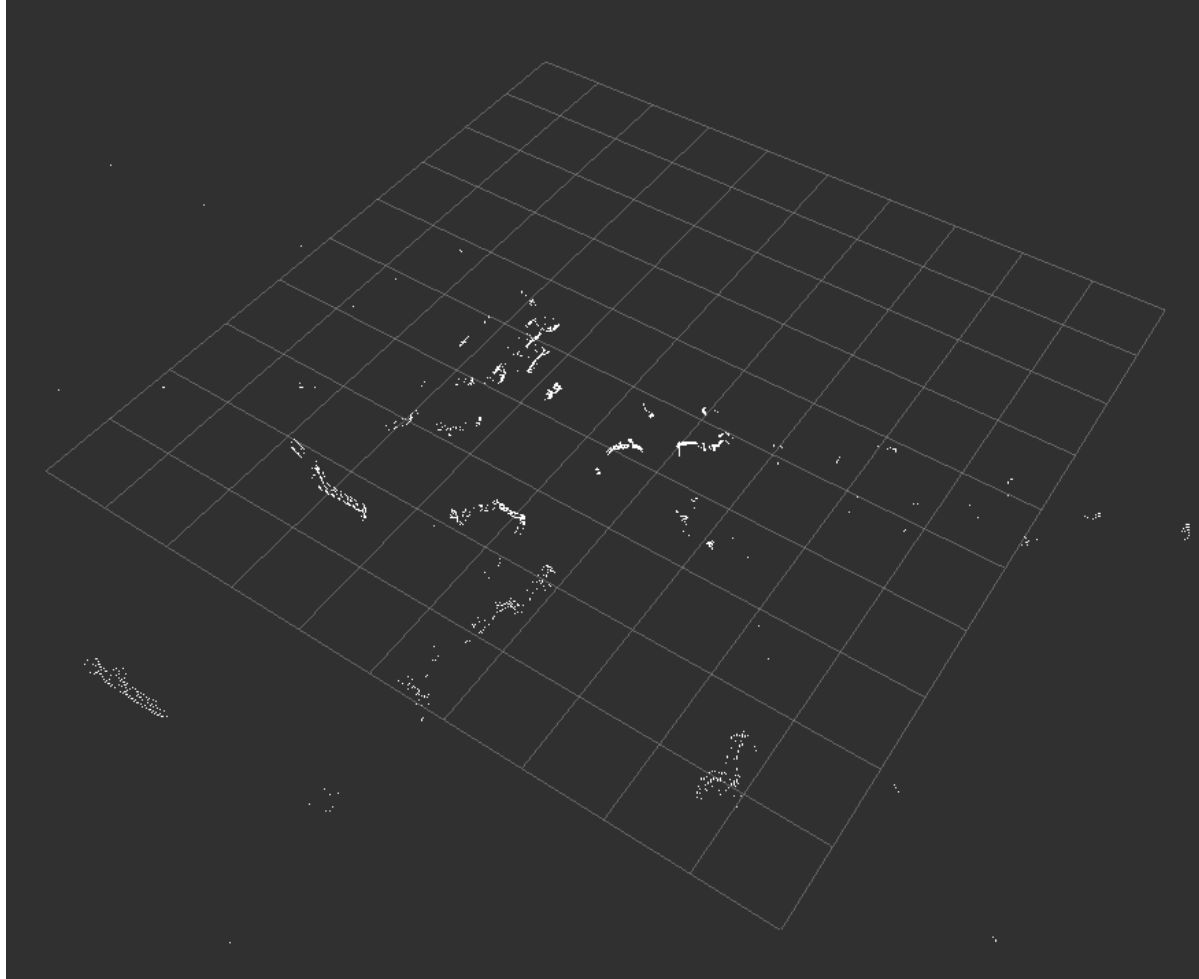


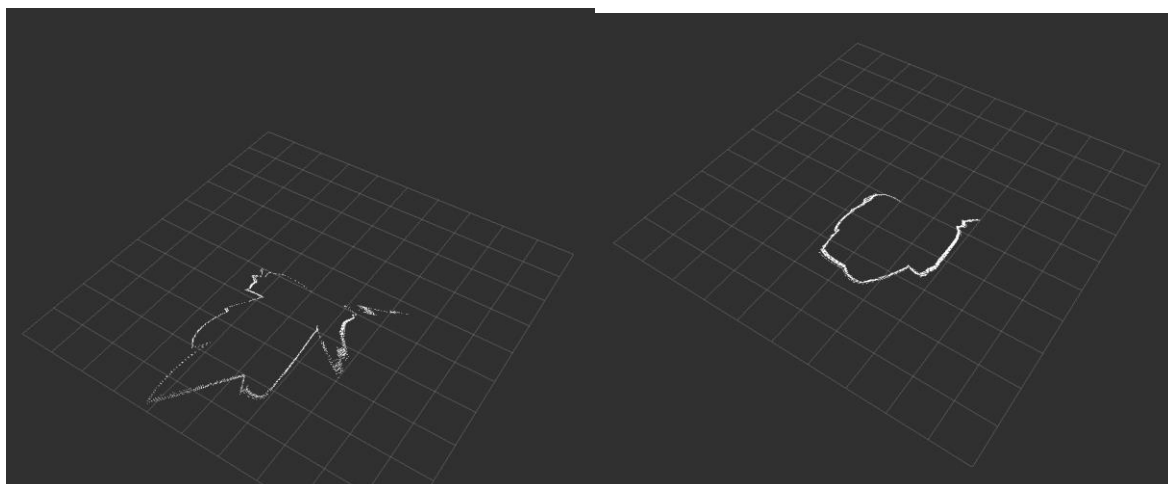
**Name: Sanjuksha Nirgude**

## **LIDAR FILTERING – Explanation and results**

The test.py file along with this document contains the ROS node for filtering the data given by the ROS bag lidar\_test\_data.bag. The data extracted was of the LaserScan type. But while filtering only the range attribute was changed. The noise seen by the data is something as follows when the data is unfiltered.

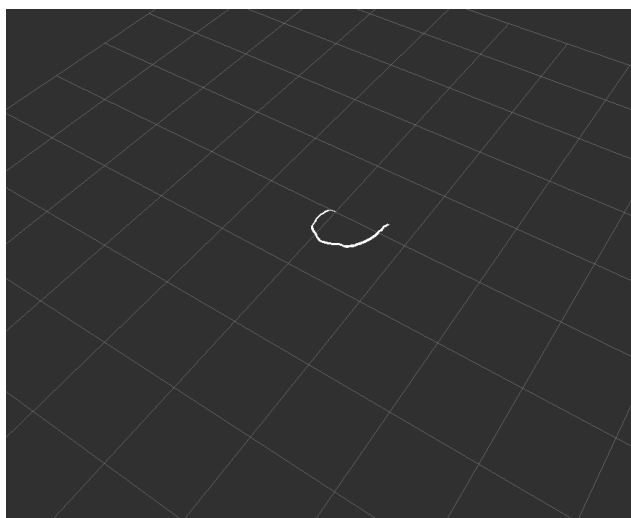


When the test.py node is run on the data from the ROS bag file and the data is filtered, it gives the following results. The parameter RC is modified to observe the varied results. As the value of RC increases the filtering increases. But as it can be seen in the last figure, too much higher value of RC gives results in which the sensor ignores lot of relevant data.



**$RC = 0.2$**

**$RC = 5$**



**$RC = 10$**