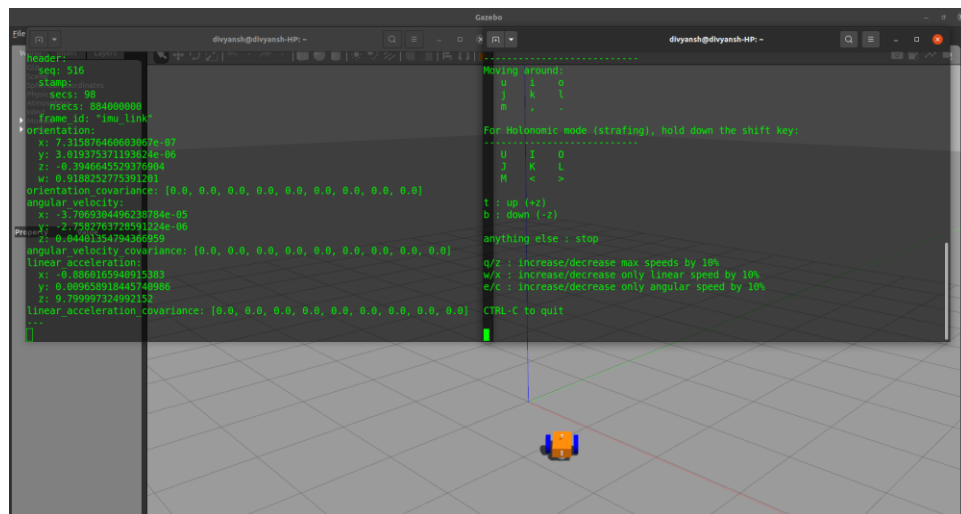


# Assignment VII

## ROS

Integrate the GPS and IMU Gazebo Plugins to the created Two Wheeled Robot

\*\*For GPS used hector plugins



```
(Cbase) divyansh@divyansh-HP:~$ rostopic list
/clock
/cmd_vel
/global_coordinates
/gazebo/link_states
/gazebo/model_states
/gazebo/parameter_descriptions
/gazebo/parameter_updates
/gazebo/performance_metrics
/gazebo/set_link_state
/gazebo/set_model_state
/gps/fix
/gps/fix/position/parameter_descriptions
/gps/fix/position/parameter_updates
/gps/fix/status/parameter_descriptions
/gps/fix/status/parameter_updates
/gps/fix/velocity/parameter_descriptions
/gps/fix/velocity/parameter_updates
/imu
/odom
/rosout
/rosout_agg
/tf
(base) divyansh@divyansh-HP:~$
```

```
latitude: -30.060190149474717
longitude: -51.17395222947067
altitude: 10.210910552997584
position_covariance: [0.002501000000000006, 0.0, 0.0, 0.0, 0.025010000000000006,
0.0, 0.0, 0.0, 0.0, 0.025010000000000006,
0.0, 0.0, 0.0, 0.0, 0.025010000000000006]
position_covariance_type: 2
header:
  seq: 993
  stamp:
    secs: 220
    nsecs: 0
  frame_id: "gps_link"
status:
  status: 0
  service: 0
latitude: -30.060189521464036
longitude: -51.17395160804227
altitude: 10.242392062579235
position_covariance: [0.002501000000000006, 0.0, 0.0, 0.0, 0.025010000000000006,
6, 0.0, 0.0, 0.0, 0.025010000000000006,
0.0, 0.0, 0.0, 0.0, 0.025010000000000006]
position_covariance_type: 2
---
U I 0
J K L
M < >

t : up (+z)
b : down (-z)

anything else : stop

q/z : Increase/decrease max speeds by 10%
w/x : Increase/decrease only linear speed by 10%
e/c : Increase/decrease only angular speed by 10%

CTRL-C to quit

currently: speed 1.8797616762370453 turn 0.9
currently: speed 1.8797616762370453 turn 0.9990000000000001
currently: speed 1.8797616762370453 turn 1.0000000000000002
currently: speed 1.8797616762370453 turn 1.1979000000000004
currently: speed 1.8797616762370453 turn 1.3170900000000005
currently: speed 1.8797616762370453 turn 1.1859210000000004
currently: speed 1.8797616762370453 turn 1.3045131000000005
```

```
divyansh@divyansh-HP:~$ rostopic list
/clock
/cmd_vel
/global_coordinates
/gazebo/link_states
/gazebo/model_states
/gazebo/parameter_descriptions
/gazebo/parameter_updates
/gazebo/performance_metrics
/gazebo/set_link_state
/gazebo/set_model_state
/gps/fix
/gps/fix/position/parameter_descriptions
/gps/fix/position/parameter_updates
/gps/fix/status/parameter_descriptions
/gps/fix/status/parameter_updates
/gps/fix/velocity/parameter_descriptions
/gps/fix/velocity/parameter_updates
/imu
/odom
/rosout
/rosout_agg
/tf
(base) divyansh@divyansh-HP:~$
```

```
latitude: -30.060190149474717
longitude: -51.17395222947067
altitude: 10.210910552997584
position_covariance: [0.002501000000000006, 0.0, 0.0, 0.0, 0.025010000000000006,
0.0, 0.0, 0.0, 0.0, 0.025010000000000006,
0.0, 0.0, 0.0, 0.0, 0.025010000000000006]
position_covariance_type: 2
header:
  seq: 1226
  stamp:
    secs: 306
    nsecs: 750000000
  frame_id: "gps_link"
vector:
  x: 0.0004123307936094
  y: -1.3027893850377826
  z: 0.00104815037440926
header:
  seq: 1227
  stamp:
    secs: 307
    nsecs: 750000000
  frame_id: "gps_link"
vector:
  x: 0.000568378366318374
  y: -0.39522008679129
  z: 0.7565392359212233
---
U I 0
J K L
M < >

t : up (+z)
b : down (-z)

anything else : stop

q/z : Increase/decrease max speeds by 10%
w/x : Increase/decrease only linear speed by 10%
e/c : Increase/decrease only angular speed by 10%

CTRL-C to quit

currently: speed 1.8797616762370453 turn 0.9
currently: speed 1.8797616762370453 turn 0.9990000000000001
currently: speed 1.8797616762370453 turn 1.0000000000000002
currently: speed 1.8797616762370453 turn 1.1979000000000004
currently: speed 1.8797616762370453 turn 1.3170900000000005
currently: speed 1.8797616762370453 turn 1.1859210000000004
currently: speed 1.8797616762370453 turn 1.3045131000000005
```