

five_mobile_restricted Turtlebot 4 Report

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```
## Warning in t1_gazebo$x_position - t1_discrete$x_position: longer object
## length is not a multiple of shorter object length

## Warning in t1_gazebo$y_position - t1_discrete$y_position: longer object
## length is not a multiple of shorter object length

## Warning in t1_gazebo$x_position - t1_continuous$x_position: longer object
## length is not a multiple of shorter object length

## Warning in t1_gazebo$y_position - t1_continuous$y_position: longer object
## length is not a multiple of shorter object length
```

This is a summary of the data from the five_mobile_restricted experiment, Turtlebot #4.

The runtime of this experiment was 0 hours, 41 minutes, and 44.5 seconds.

Shown below is the summary of each filter's error for both x and y coordinates, and also the error in total distance.

```
summary(t1_continuous$x_error)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## -1.56100  0.05833  0.06226  0.05508  0.06628  0.09609
```

```
summary(t1_continuous$y_error)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## -3.91800 -0.07843 -0.07546 -0.07120 -0.07252  0.01904
```

```
summary(t1_continuous$dist_error)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.00000  0.09877  0.09892  0.09239  0.09933  4.21700
```

```
summary(t1_discrete$x_error)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## -1.4640  0.1559  0.1600  0.1443  0.1640  0.1815
```

```
summary(t1_discrete$y_error)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## -3.92900 -0.08908 -0.08606 -0.08184 -0.08304  0.02025
```

```
summary(t1_discrete$dist_error)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.1801  0.1823  0.1706  0.1845  4.1920
```