

two_stationary Turtlebot 1 Report

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```
## Loading required package: data.table
```

This is a summary of the data from the two_stationary experiment, Turtlebot #1.

The runtime of this experiment was 0 hours, 4 minutes, and 0.4 seconds.

The total number of external pose measurements recieved by the robot during this time was 1917 which means poses were received at an average of 7.9742097 poses per second.

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

```
summary(continuous$x_error)
```

##	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
##	-2.417e-06	5.129e-04	1.027e-03	1.027e-03	1.541e-03	2.055e-03

```
summary(continuous$y_error)
```

##	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
##	-6.120e-10	1.002e-07	3.110e-07	3.994e-07	6.505e-07	1.172e-06

```
summary(continuous$dist_error)
```

##	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
##	4.942e-07	5.129e-04	1.027e-03	1.027e-03	1.541e-03	2.055e-03

```
summary(discrete$x_error)
```

##	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
##	-2.417e-06	1.289e-02	1.345e-02	1.341e-02	1.407e-02	1.473e-02

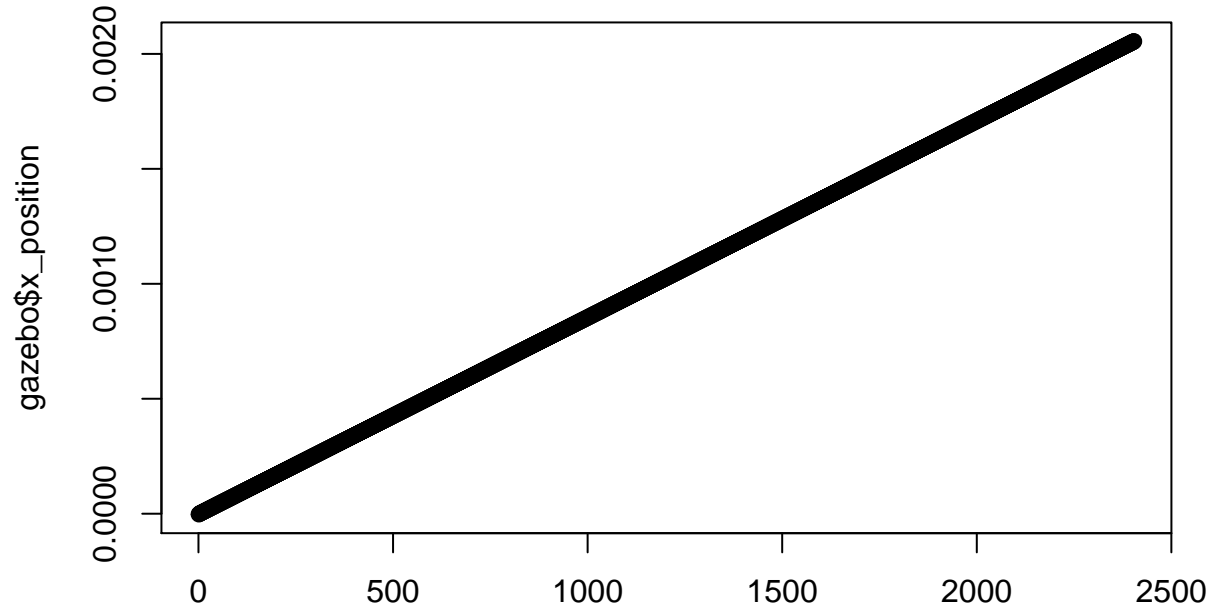
```
summary(discrete$y_error)
```

##	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
##	-0.0002718	0.0001216	0.0005289	0.0005302	0.0009342	0.0013380

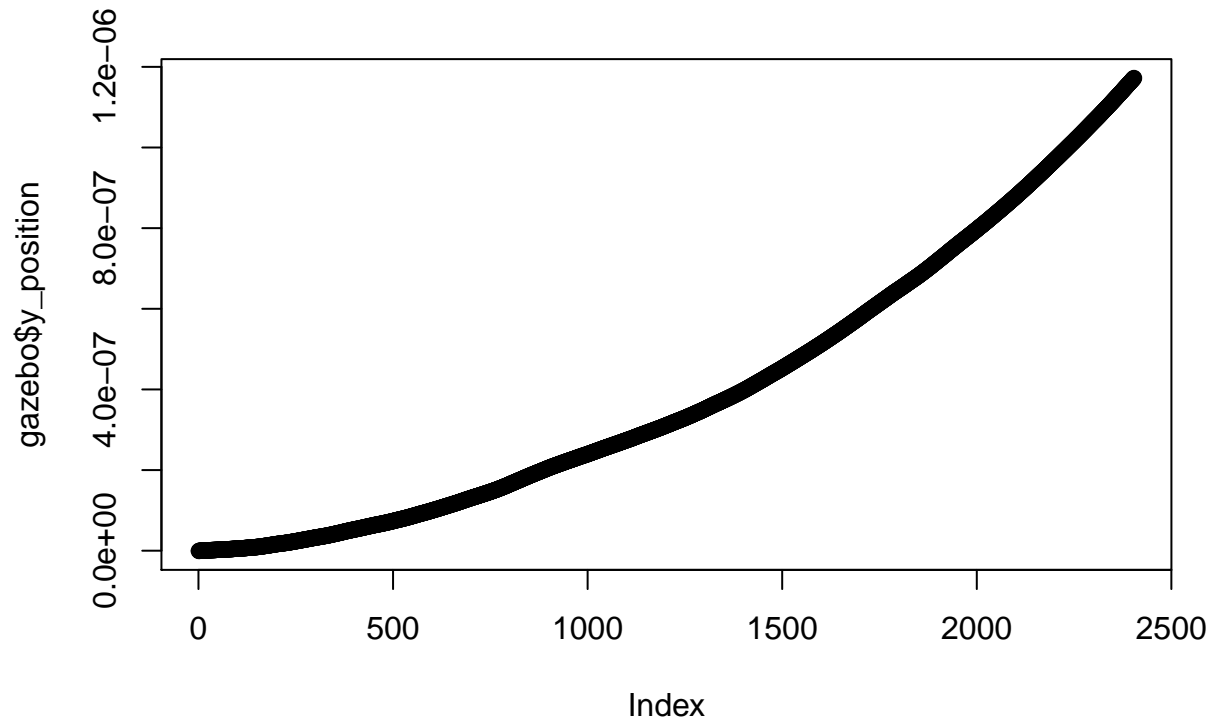
```
summary(discrete$dist_error)
```

##	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
##	4.940e-07	1.293e-02	1.346e-02	1.343e-02	1.407e-02	1.473e-02

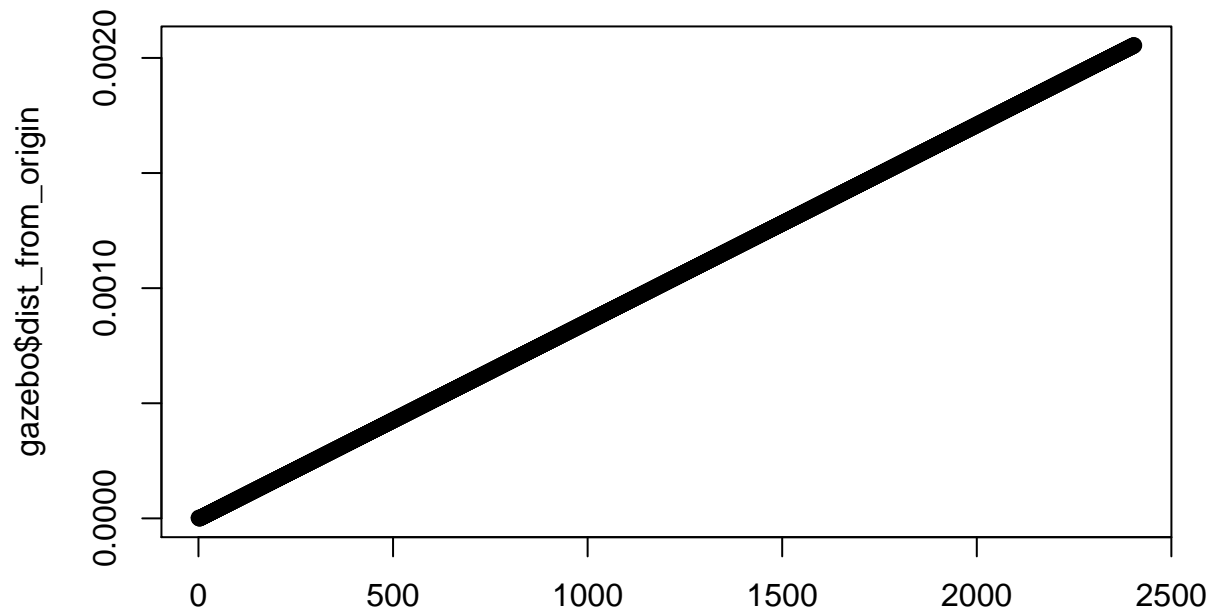
X coordinate of robot over time



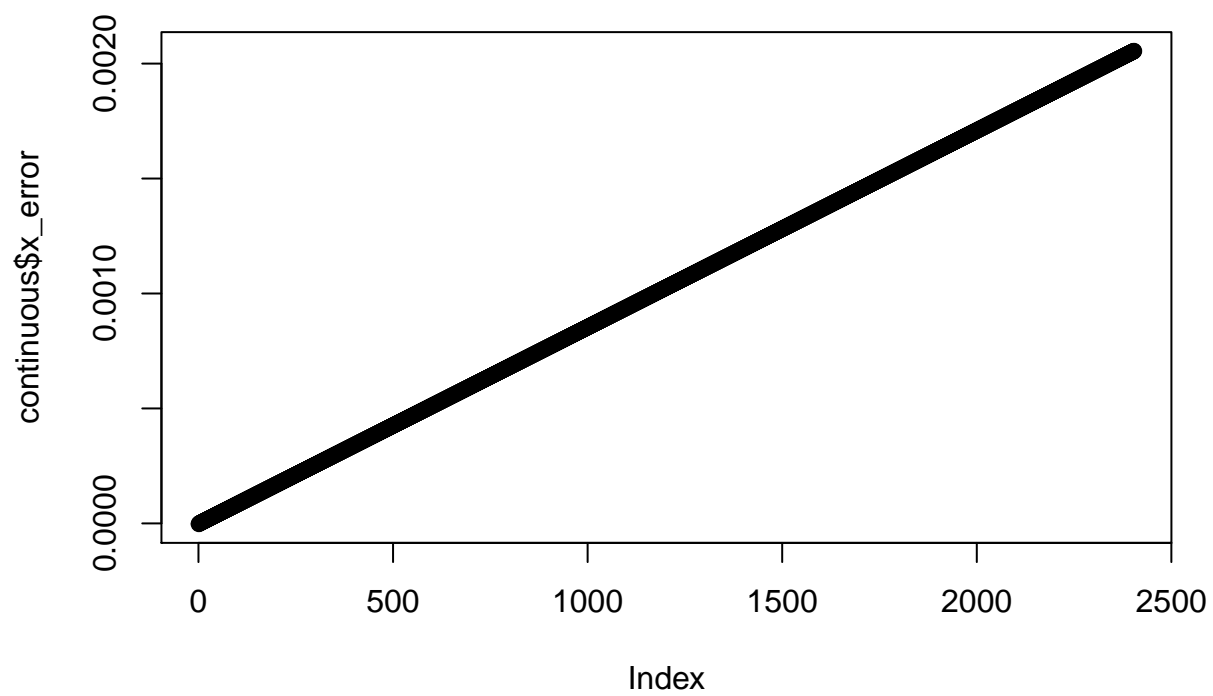
Y coordinate of robot over time

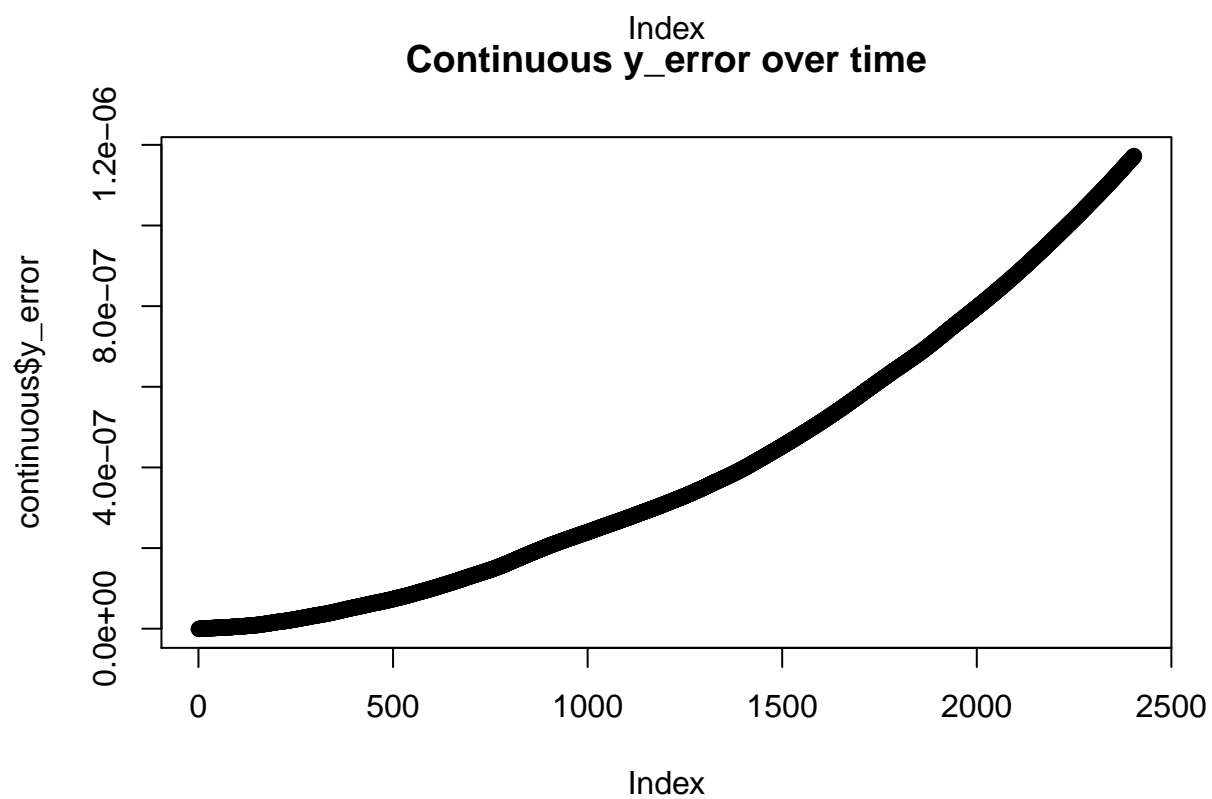
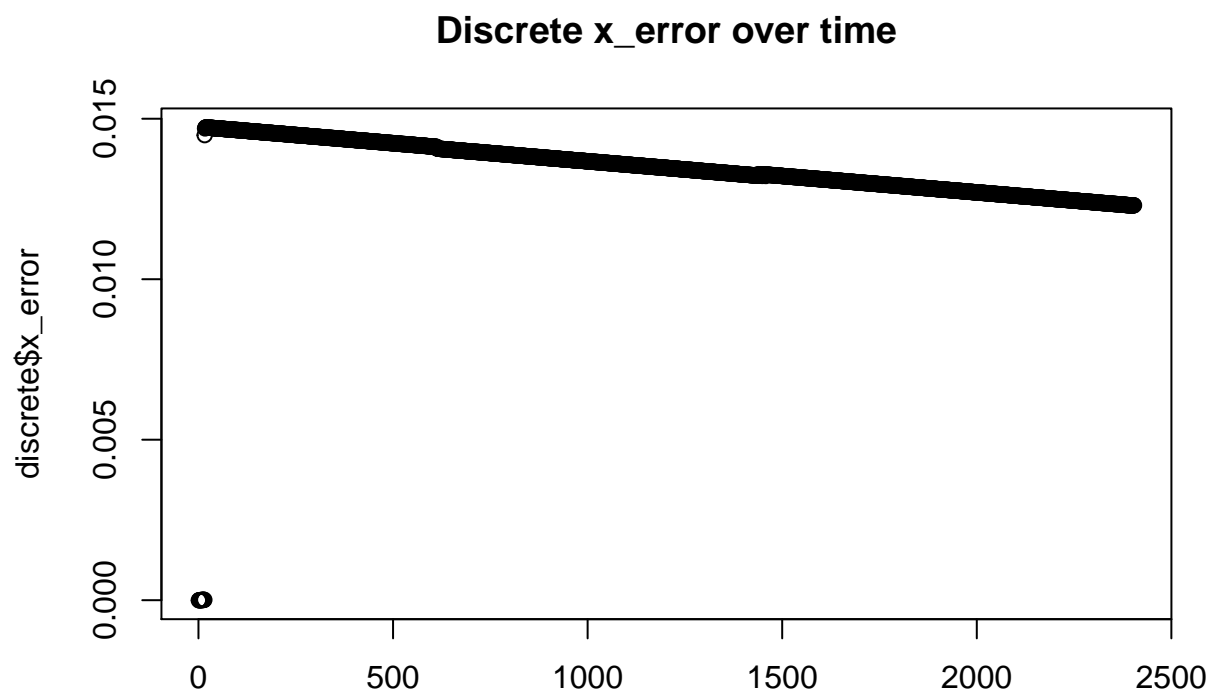


Distance from origin vs. time

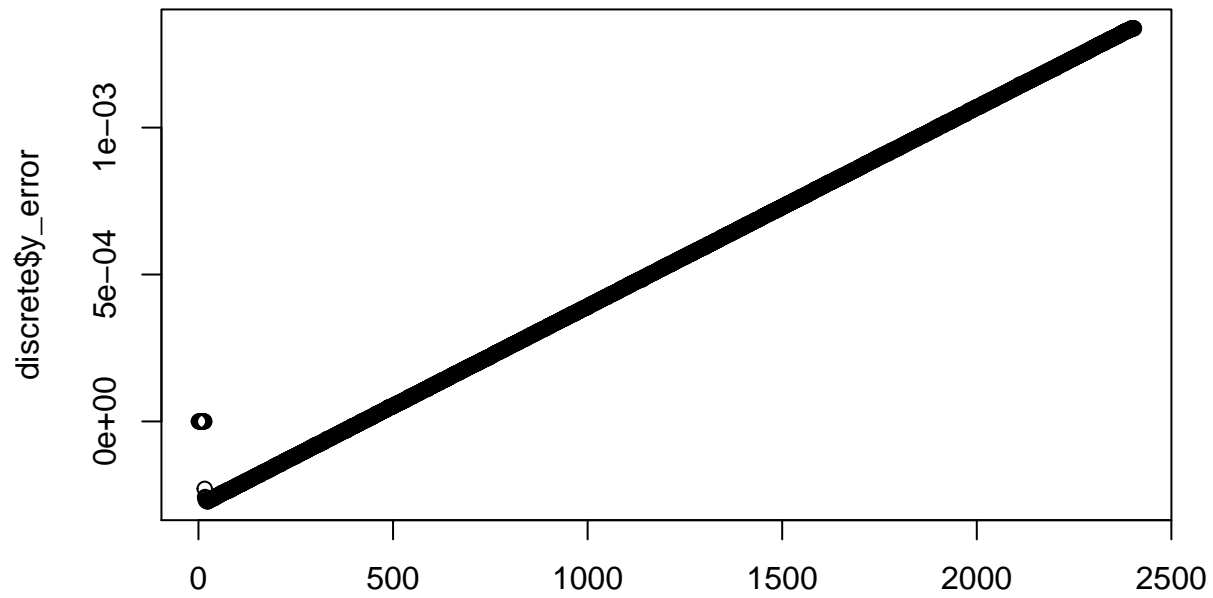


Continuous x_error over time





Discrete y_error over time



Continuous total distance error over time

