one_stationary.R

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Thu Jun 16 17:01:41 2016

```
library(grid)
library(gridExtra)
library(xtable)
library(stargazer)
```

```
##
## Please cite as:
```

```
##  Hlavac, Marek (2015). stargazer: Well-Formatted Regression and Summary Statistics Tables.
```

```
##  R package version 5.2. http://CRAN.R-project.org/package=stargazer
```

```
t1_gazebo <- read.csv("~/thesis/experiment_data/one_stationary/turtlebot1_gazebo_odometry_filtered.csv")
t1_continuous <- read.csv("~/thesis/experiment_data/one_stationary/turtlebot1_continuous_odometry_filte
t1_discrete <- read.csv("~/thesis/experiment_data/one_stationary/turtlebot1_discrete_odometry_filtered.
t1_external_count <- read.csv("~/thesis/experiment_data/one_stationary/turtlebot1_external_pose_count.cs

t1_gazebo$dist_from_origin <- sqrt(t1_gazebo$x_position ^ 2 + t1_gazebo$y_position ^ 2)

t1_discrete$x_error <- t1_gazebo$x_position - t1_discrete$x_position
t1_discrete$y_error <- t1_gazebo$y_position - t1_discrete$y_position
t1_discrete$dist_error <- sqrt(t1_discrete$x_error ^ 2 + t1_discrete$y_error ^ 2)

t1_continuous$x_error <- t1_gazebo$x_position - t1_continuous$x_position
t1_continuous$y_error <- t1_gazebo$y_position - t1_continuous$y_position
t1_continuous$dist_error <- sqrt(t1_continuous$x_error ^ 2 + t1_continuous$y_error ^ 2)

pdf("one_stationary_ground_truth_locations.pdf")
plot(t1_gazebo$x_position, t1_gazebo$y_position)
title("Ground truth visited locations of robot")
dev.off()
```

```
## pdf
##   2
```

```
pdf("one_stationary_dist_from_origin.pdf")
plot(t1_gazebo$dist_from_origin)
title("Distance from origin vs. time")
dev.off()
```

```
## pdf
##   2
```

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

```
##       Min.    1st Qu.     Median       Mean    3rd Qu.       Max.
## -0.0000003  0.0148300  0.0296500  0.0296500  0.0444800  0.0593000
```

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

```
##       Min.    1st Qu.     Median       Mean    3rd Qu.       Max.
## -1.000e-10  4.092e-05  1.629e-04  2.166e-04  3.643e-04  6.492e-04
```

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

```
##      Min.   1st Qu.    Median      Mean   3rd Qu.      Max.
## 2.500e-07 1.483e-02 2.965e-02 2.965e-02 4.448e-02 5.931e-02
```

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

```
##       Min.    1st Qu.     Median       Mean    3rd Qu.       Max.
## -0.0000003  0.0148300  0.0296500  0.0296500  0.0444800  0.0593000
```

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

```
##       Min.    1st Qu.     Median       Mean    3rd Qu.       Max.
## -1.000e-10  4.092e-05  1.629e-04  2.166e-04  3.643e-04  6.492e-04
```

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

```
##      Min.   1st Qu.    Median      Mean   3rd Qu.      Max.
## 2.500e-07 1.483e-02 2.965e-02 2.965e-02 4.448e-02 5.931e-02
```