

ps1__question3

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input data

Using code as below:

```
train = read.table('C:/Users/wenji/Downloads/train_trajectories.csv', sep = ',', header = TRUE)
```

input training data set and compute it.

##		tot_dist	max_abs	avg_abs_dev	AUC
##	(1,2)	1063.002	85.08215	6.032171	46527.00
##	(1,3)	1032.680	65.41896	14.552720	16242.50
##	(1,4)	1153.464	99.18373	18.172340	54516.01
##	(1,5)	1049.805	64.34041	20.684094	32053.50
##	(1,6)	1961.695	623.55022	92.456128	228192.85

From the result above, we can find that the computation is great expect the area estimation. We still can use the first three line getting an accurate result.

compute test data set

Input test data set and compute it.

```
test = read.table('C:/Users/wenji/Downloads/test_trajectories.csv', sep = ',', header = TRUE)
#split data into different tables
t1=subset(test, test$subject_nr==6 & test$count_trial==1, select=1:5)
t2=subset(test, test$subject_nr==7 & test$count_trial==1, select=1:5)
t3=subset(test, test$subject_nr==8 & test$count_trial==1, select=1:5)
t4=subset(test, test$subject_nr==9 & test$count_trial==1, select=1:5)
t5=subset(test, test$subject_nr==10 & test$count_trial==1, select=1:5)
#transform data
my_tra1 = as.matrix(t1[,3:5])
my_tra2 = as.matrix(t2[,3:5])
my_tra3 = as.matrix(t3[,3:5])
my_tra4 = as.matrix(t4[,3:5])
my_tra5 = as.matrix(t5[,3:5])
#compute data
t_result = matrix(nrow = 5, ncol = 4)
t_result[1,] = my_curv(my_tra1)
t_result[2,] = my_curv(my_tra2)
t_result[3,] = my_curv(my_tra3)
t_result[4,] = my_curv(my_tra4)
t_result[5,] = my_curv(my_tra5)
colnames(t_result) = c('tot_dist', 'max_abs', 'avg_abs_dev', 'AUC')
rownames(t_result) = c('(6,1)', '(7,1)', '(8,1)', '(9,1)', '(10,1)')
t_result
```

##		tot_dist	max_abs	avg_abs_dev	AUC
##	(6,1)	1650.769	464.89910	90.387825	275254.35
##	(7,1)	1252.550	35.46823	4.723562	19981.20
##	(8,1)	1069.158	18.41130	1.757015	10133.99
##	(9,1)	1092.076	74.20550	7.302945	36134.40
##	(10,1)	1086.835	85.33933	12.487715	51446.32