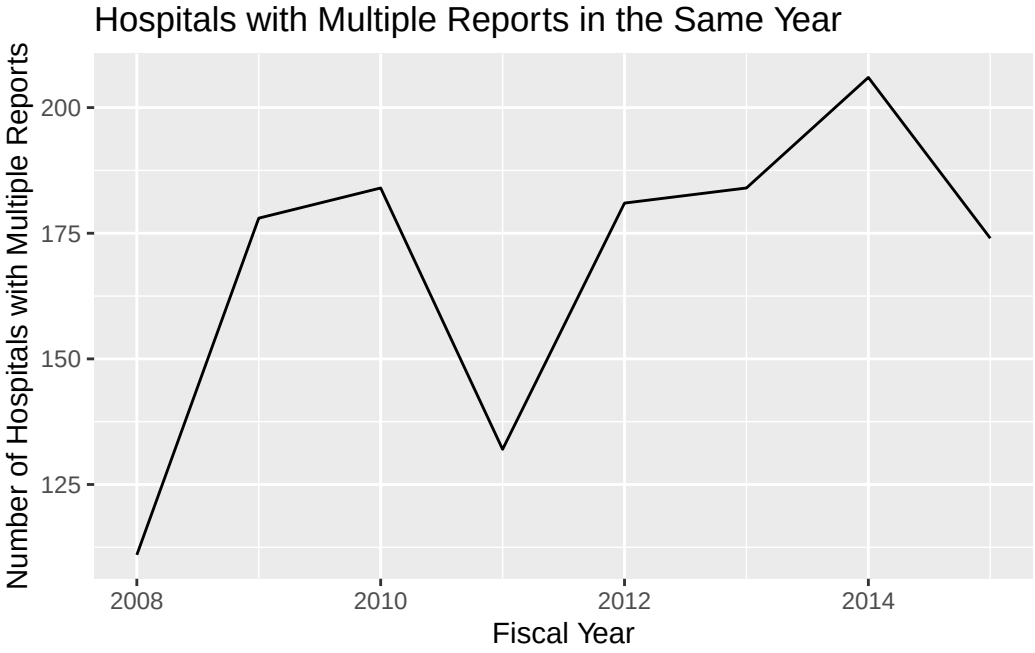
Git Repository: https://github.com/AlekhyaPidugu/Homework2

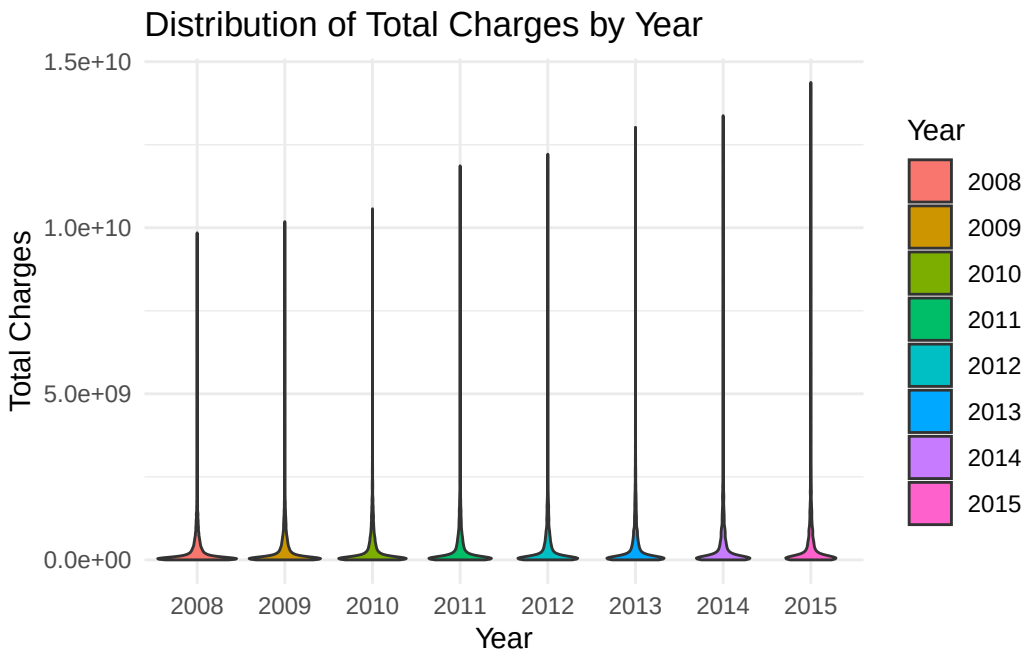
Question 1


Hospitals with Multiple Reports in the Same Year
Number of Hospitals with Multiple Reports
200
175
150
125
2008
2010
2012
2014
Fiscal Year

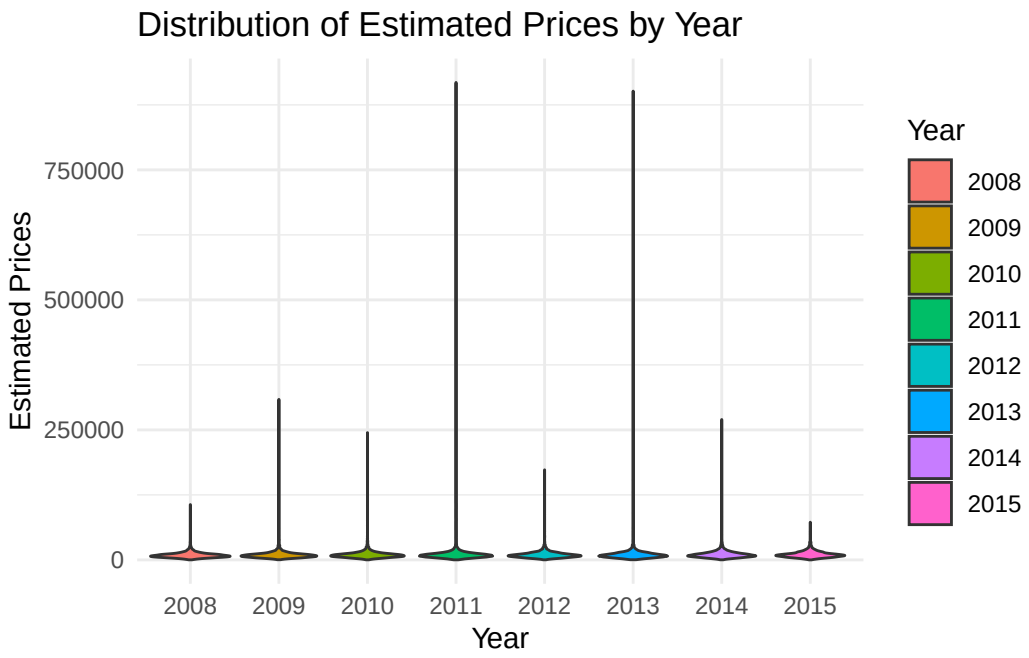
Question 2

There are 6486 unique hospital IDs.

Question 3


Distribution of Total Charges by Year
Total Charges
1.5e+10
1.0e+10
5.0e+09
0.0e+00
2008
2009
2010
2011
2012
2013
2014
2015
Year
Year
2008
2009
2010
2011
2012
2013
2014
2015

Question 4


Distribution of Estimated Prices by Year
Estimated Prices
750000
500000
250000
0
2008
2009
2010
2011
2012
2013
2014
2015
Year
Year
2008
2009
2010
2011
2012
2013
2014
2015

Question 5

Not Penalized 9551
Penalized 9883

Question 6

0 7612 7465 8706 8287
1 6981 8529 8584 8566

Question 7

Table 1: ATE values for different estimators

Estimator	ATE
Nearest Neighbor (Inverse Variance Distance)	199.5281
Nearest Neighbor (Mahalanobis Distance)	199.5281
Inverse Propensity Weighting	199.5281
Simple Linear Regression	199.5281

Question 8

The results from the various treatment effect estimators are the same.

Question 9

I think it is hard to claim that there is a causal effect of the penalty with a controlled design to test this. But using just observation with this data there may be a causal effect but you just have to make sure you account for confounding factors when making this interpretation of the data.

Question 10

I take back what I said about this data being easier to work with. Quarto is still very challenging but I got the PDF to work. I could not load my work space becuase it kept saying the directory did not exist. But I copied the file path directly so I do not know. Finally figured out question 7.