## Name

TheDebugger

Mean Squared Error: 0.004400654824710213

R^2: 0.9206683031451792

## Method: Bagging

I noticed a few of the top entries used this method, so I changed from bagging to XGBoost and used the large dataset this time around for training but found that I had better performance with bagging.

## Question 2 (Plot):

A graph of a graph showing the value of a price

Description automatically generated with medium confidence

It seems to be a continuous trend in our dataset. There do not seem to be any apparent discontinuities across each 10,000-mile mark. There are a few very faint discrepancies, but it is not nearly as apparent as the research study had. One of the possible reasons for this is the dataset. The dataset used in the research had 22 million transactions and contained data from 2002 to 2008. Our dataset is much more limited (less than 0.5% of the data the study used), so it might not be visible to see any discontinuities. Our sample may not represent these economic factors well. Considering the timing of 2002-2008 and the fact that the average price of cars back then was $10,000 also may play a factor.

## Question 3 (ChatGPT):

For question 1, I noticed that some of the top entries used XGBoost so I asked ChatGPT how I could implement it in Python.

A screenshot of a computer

Description automatically generated

A screenshot of a computer program

Description automatically generated

For question 2, I provided a description of the plot directly from the research paper to ChatGPT and asked it to help me build the plot. This saved me a lot of time and worked out very well with few modifications required.

A black and white text

Description automatically generatedA screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A computer screen with text and numbers

Description automatically generated

## Code: