

ECON833 PS6

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Results for PS6

For the first problem:

From the result of the decision tree, we could observe two main results:

1. For the respondents who are Democrat, age > 54.5 , education > 15.5 , female, they have a higher feeling thermometer to Biden.
2. For the respondents who are Republican, men, they have a lower feeling thermometer to Biden.

The MSE of a tree of depth 3 and 8 leaves = 396.1937146321307

For the second problem:

'max_{depth}' : 3, 'min_{samplesleaf}' : 2, 'min_{samplessplit}' : 9

MSE = 404.70994082761746

For the third problem-Random Forest:

Best parameters:

'max_{depth}' : 10, 'max_{features}' : 2, 'min_{samplesleaf}' : 19, 'min_{samplessplit}' :

11, 'n_{estimators}' : 200

MSE = 397.29377597944983 It is obvious that the MSE in RF is smaller than that in the second problem.