Results of our prediction models

Using the required formula in strategy (c), we calculated the expected value for 3 prediction models, which are Big Tree, Pruned tree and best threshold pruned tree. Calculated the False Positive Cost is 5.1×10^7 and the False Negative Cost is 1.93×10^8, we need to lower the influence of False Negative Cost to maximize expected value. This idea is exactly used in best threshold pruned tree.

As showing in the result table below, the best threshold pruned tree prediction model earns highest expected value of $490.34 million comparing with the other two prediction models, even though the best threshold pruned tree model has the lowest accuracy among three prediction models.

Comparison with other Strategies

Using strategy (a) and strategy (b), we only get expected value of $490.0 million and $345.0 million, respectively. Obviously, we definitely don't recommend strategy (b) to you since you -r company will earn less profit when using this strategy than when using strategy (a).

Now consider the best threshold pruned tree prediction model using strategy (c). This prediction model makes the highest profit and helps the company actually earn more $3 48201 than the strategy (a). So we highly recommend you use this best threshold pruned tre e prediction model.

Result table:

	Expected Value ($)
Strategy a	490000000
Strategy b	345000000
Strategy c	
Big Tree	450533759
Pruned Tree	459122172
Best Threshold Pruned tree	490348201

Word Count: 232