Persuasion Analytics (and Capstone Project)

Week 4 exercises APA track

50 points

1. Discuss how you could collect IDs specifically for a universe of voters who are not reachable on the phone. [2 points]

Door knockers used to use paper on clipboards to record voter IDs, matching name and address etc.

2. How would you use the uplift models built in the exercises for week three to target a Democratic campaign's persuasion program? Assume you have budget to send 200,000 pieces of mail. [2 points]

We can achieve maximal Incremental Response when a group of the highest scored voter is targeted. Due to the 2000,000 piece of mail budget, we can send out to the top voter by calculating the score and lift of targets.

3. Which message or messages would you use? Would you mail only message A, only message B, or a mix of the two? If you use both messages, do you split them evenly, sending message A to 100,000 voters and message B to 100,000 voters, or do you do some different mix? [6 points]

We will send the mix of the two. But we won't split them evenly. Use the two uplift models to predict the target and get the score for both message A and message B model. By looking at the score for both message A and B, We then calculate the uplift score by taking difference of two scores. sending message A to the voters with the largest values of difference, sending message B to the other voters.

4. How do you decide which voters get which message? [2 points]

By looking at the lift table based on the differenct of score(messageA)-score(messageB)

5. Which candidate was ahead in the first wave of IDs? [2 points]

the Republican was running well ahead, this is reflected in the first wave of IDs.

6. Which candidate was ahead in the second wave of IDs? [2 points]

The campaign did another wave of IDs, and found that the Democrat had closed the gap significantly and was ahead.

7. Does the candidate who was leading in the second wave have the race locked up? If not, why not? [6 points]

No, the race is not locked up yet.

8. Imagine that you are running the Democratic campaign. Based on the 2nd wave of IDs, what is your strategic task in the last few weeks of the election? How will you accomplish that goal? [4 points]

Sort out the volunteers etc who can help on the big day. Local knowledge is critically important. Direct mail shots and emails are sent out. undecided voters can be pushed into your campaign with last-minute persuasion which will have the greatest impact. Getting the candidate to pick up the phone to voters.

10. [Applied Predictive Analytics Only] The smaller dataset includes only records for voters who were IDed in both the first and 2nd wave of IDs. How might this subset differ from a random sample of the entire voterfile? [20 points]

small dataset is biased dataset comparing to the random sample of the entire voterfile. When we fit the model especially for decision tree model, it will affect the model result vs. the original entire voterfile.