Subjective Questions- Answers

1. Which are the top three variables in your model which contribute most towards the probability of a lead getting converted?

Solution: Based on the coefficient values from below screenshot, the following are the top three variables that contribute most towards the probability of a lead getting converted :

1. Tags_Lost to EINS
2. Tags_Closed by Horizzon
3. Tags_Busy

```
Tags_Lost to EINS                                       8.536723
Tags_Closed by Horizzon                                 8.458760
Tags_Busy                                               3.990670
Tags_Will revert after reading the email                3.868249
Tags_in touch with EINS                                 3.394666
Tags_Want to take admission but has financial problems  3.382832
Lead Origin_Lead Add Form                               2.773458
Last Notable Activity_SMS Sent                          2.668656
Last Activity_Had a Phone Conversation                  2.314417
What is your current occupation_Working Professional    1.358837
Tags_Ringing                                           -0.748086
Do Not Email                                           -1.514073
What is your current occupation_Unemployed             -1.815022
const                                                  -2.832407
dtype: float64
```

##

2. What are the top 3 categorical/dummy variables in the model which should be focused the most on in order to increase the probability of lead conversion?

Solution: Again, based on the coefficient values from the screen shot in the question above, the following are the top three categorical/dummy variables that should be focused the most in order to increase the probability of lead conversion :

1. Tags_Lost to EINS
2. Tags_Closed by Horizzon
3. Tags_Busy

##

3. X Education has a period of 2 months every year during which they hire some interns. The sales team, in particular, has around 10 interns allotted to them. So during this phase, they wish to make the lead conversion more aggressive. So they want almost all of the potential leads (i.e. the customers who have been predicted as 1 by the model) to be converted and hence, want to make phone calls to as many of such people as possible. Suggest a good strategy they should

employ at this stage.

Solution:

- In the below image, the final prediction is calculated based on a optimal cut off value - 0.4
- In order to make the sales aggressive, the company may contact all the leads which have a conversion probability (value = 1 ; predicted as one).
- They can also lower the threshold or cut-off value to 0.3 & choose the leads which have a conversion probability (value = 1).

```
## Predcited as one by the model & also we can lower the cut-off as 0.3:
```

	Converted	Converted_probability	ID	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	Predicted
2453	0	0.314497	2453	1	1	1	1	0	0	0	0	0	0	0
6277	1	0.998621	6277	1	1	1	1	1	1	1	1	1	1	1
5811	0	0.004516	5811	1	0	0	0	0	0	0	0	0	0	0
7798	0	0.121450	7798	1	1	0	0	0	0	0	0	0	0	0
1351	0	0.121450	1351	1	1	0	0	0	0	0	0	0	0	0
4402	0	0.055598	4402	1	0	0	0	0	0	0	0	0	0	0
812	0	0.009495	812	1	0	0	0	0	0	0	0	0	0	0
5686	1	0.868696	5686	1	1	1	1	1	1	1	1	1	0	1
7967	1	0.314497	7967	1	1	1	1	0	0	0	0	0	0	0
4174	1	0.868696	4174	1	1	1	1	1	1	1	1	1	0	1
356	1	0.916421	356	1	1	1	1	1	1	1	1	1	1	1
80	0	0.004516	80	1	0	0	0	0	0	0	0	0	0	0
8101	1	0.999605	8101	1	1	1	1	1	1	1	1	1	1	1
6989	1	0.314497	6989	1	1	1	1	0	0	0	0	0	0	0
5680	0	0.314497	5680	1	1	1	1	0	0	0	0	0	0	0

##

4. Similarly, at times, the company reaches its target for a quarter before the deadline. During this time, the company wants the sales team to focus on some new work as well. So during this time, the company's aim is to not make phone calls unless it's extremely necessary, i.e. they want to minimize the rate of useless phone calls. Suggest a strategy they should employ at this stage.

Solution:

- Extremely necessary, i.e. they want to minimize the rate of useless phone calls or only important leads.

- In order to minimize the rate of useless phone calls, the company may contact all the leads which have a conversion probability (value = 1) with a cut-off value of 0.5 or greater.

- However, the downside here would be that we may miss out on those leads that are actually converted but then the model wrongly predicts them as not converted.
- 0.5 or greater than 0.5 - cut-off value can be chosen and predicted as one by the model.

	Converted	Converted_probability	ID	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	Predicted
1769	0	0.314497	1769	1	1	1	1	0	0	0	0	0	0	0
9206	0	0.004516	9206	1	0	0	0	0	0	0	0	0	0	0
6350	0	0.314497	6350	1	1	1	1	0	0	0	0	0	0	0
506	0	0.314497	506	1	1	1	1	0	0	0	0	0	0	0
6990	1	0.868696	6990	1	1	1	1	1	1	1	1	1	0	1
3169	0	0.314497	3169	1	1	1	1	0	0	0	0	0	0	0
6930	0	0.009495	6930	1	0	0	0	0	0	0	0	0	0	0
3088	0	0.004516	3088	1	0	0	0	0	0	0	0	0	0	0
6846	0	0.314497	6846	1	1	1	1	0	0	0	0	0	0	0
9004	1	0.979950	9004	1	1	1	1	1	1	1	1	1	1	1
4389	1	0.868696	4389	1	1	1	1	1	1	1	1	1	0	1
6845	0	0.314497	6845	1	1	1	1	0	0	0	0	0	0	0
8949	1	0.314497	8949	1	1	1	1	0	0	0	0	0	0	0
4466	1	0.993715	4466	1	1	1	1	1	1	1	1	1	1	1
3318	0	0.009495	3318	1	0	0	0	0	0	0	0	0	0	0

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