Lead Scoring Case Study

SUBJECTIVE ANSWERS

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

   a. Last Notable Activity_Unreachable   2.346566
   b. Last Activity_Had a Phone Conversation   2.312539
   c. What is your current occupation_Working Professional   1.258886

```
print(                         Feature Importance                    )
sorted_params = res.params.sort_values(ascending=False)
print(sorted_params)
```

```
Features used in Final Model : Index(['Total Time Spent on Website', 'Last Activity_Converted to Lead',
       'Last Activity_Email Bounced', 'Last Activity_Had a Phone Conversation',
       'Last Activity_SMS Sent', 'What is your current occupation_Student',
       'What is your current occupation_Unemployed',
       'What is your current occupation_Working Professional',
       'Last Notable Activity_Modified', 'Last Notable Activity_Unreachable'],
    dtype='object')
***************************Feature Importance**************************
Last Notable Activity_Unreachable                      2.346566
Last Activity_Had a Phone Conversation                 2.312539
What is your current occupation_Working Professional   1.258886
Total Time Spent on Website                            1.166035
const                                                  1.015663
Last Activity_SMS Sent                                 0.795343
Last Notable Activity_Modified                        -0.556772
Last Activity_Converted to Lead                       -0.865305
Last Activity_Email Bounced                           -1.508343
What is your current occupation_Unemployed            -1.559398
What is your current occupation_Student               -1.680094
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?

    a. Last Activity_SMS Sent
    b. What is your current occupation_Unemployed
    c. Last Notable Activity_Modified

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 much of such people as possible. Suggest a good strategy they should employ at this stage.

In the below image, the final prediction is calculated based on an optimal cut off value of
0.37. In order to make the sales aggressive, the company may contact all the leads which have a conversion probability (value = 1) under a cut off 0.38

	Convert	Convert_Prob	Pros_ID	Predicted	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	Final_Predicted	Lead_Score
0	0	0.707539	7442	1	1	1	1	1	1	1	1	1	0	0	1	71
1	0	0.176305	6273	0	1	1	0	0	0	0	0	0	0	0	0	18
2	0	0.272823	6160	0	1	1	1	0	0	0	0	0	0	0	0	27
3	0	0.123619	609	0	1	1	0	0	0	0	0	0	0	0	0	12
4	1	0.927240	4543	1	1	1	1	1	1	1	1	1	1	1	1	93
5	0	0.237776	6886	0	1	1	1	0	0	0	0	0	0	0	0	24
6	1	0.205021	4635	0	1	1	1	0	0	0	0	0	0	0	0	21
7	0	0.147359	4475	0	1	1	0	0	0	0	0	0	0	0	0	15
8	0	0.206344	5305	0	1	1	1	0	0	0	0	0	0	0	0	21

Target leads that spend more time on the X Education portal (Total Time Spent on Website) , Last Notable Activity_Unreachable can be approached again however will have have lower probability of conversion due to course being offered price competitiveness and industry domain specific. Or can give some discount on these cases as per the budget allocation.

 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.

- SMS and Email or Whatsapp option can be used to communicate with client who has high probability of subscribing course , rather than call.

Thank You