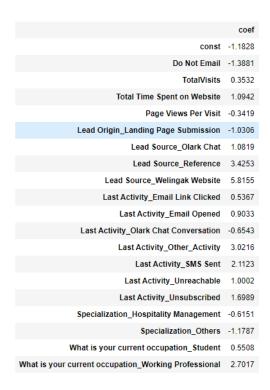
1. Which are the top three variables in your model which contribute most towards the probability of a lead getting converted?

Solution:

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

- 1. Wellingak Website and Reference (from Lead Source)
- 2. Other activity (from Last Activity)
- 3. Working Professional(from What is your current occupation)



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:

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. Wellingak Website (from Lead Source)
- 2. Reference (from Lead Source)
- 3. Other activity (from Last Activity)

	coef
const	-1.1828
Do Not Email	-1.3881
TotalVisits	0.3532
Total Time Spent on Website	1.0942
Page Views Per Visit	-0.3419
Lead Origin_Landing Page Submission	-1.0306
Lead Source_Olark Chat	1.0819
Lead Source_Reference	3.4253
Lead Source_Welingak Website	5.8155
Last Activity_Email Link Clicked	0.5367
Last Activity_Email Opened	0.9033
Last Activity_Olark Chat Conversation	-0.6543
Last Activity_Other_Activity	3.0216
Last Activity_SMS Sent	2.1123
Last Activity_Unreachable	1.0002
Last Activity_Unsubscribed	1.6989
Specialization_Hospitality Management	-0.6151
Specialization_Others	-1.1787
What is your current occupation_Student	0.5508
What is your current occupation_Working Professional	2.7017

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.

Solution:

The final prediction is calculated based on an optimal cut-off value of 0.345.

In order to make sales aggressive, the company may collect all the leads which have a conversion probability (value =1) under a cut off .3 (highlighted in the image below).

	Converted	Converted_prob	predicted	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	8.0	0.9	final_predicted	Lead_Score
0	1	0.885492	1	1	1	-1	1	1	1	1	1	1	0	1	89
1	0	0.033464	0	1	0	0	0	0	0	0	0	0	0	0	3
2	1	0.211770	0	1	1	1	0	0	0	0	0	0	0	0	21
3	0	0.171256	0	1	1	0	0	0	0	0	0	0	0	0	17
4	1	0.545298	1	1	1	1	1	1	1	0	0	0	0	1	55
5	0	0.584672	1	1	1	1	1	1	1	0	0	0	0	1	58
6	0	0.378097	0	1	1	1	1	0	0	0	0	0	0	1	38
7	0	0.108908	0	1	1	0	0	0	0	0	0	0	0	0	11
8	0	0.027781	0	1	0	0	0	0	0	0	0	0	0	0	3
9	0	0.416954	0	1	1	1	1	1	0	0	0	0	0	1	42
10	0	0.047597	0	1	0	0	0	0	0	0	0	0	0	0	5
11	1	0.903612	1	1	1	1	1	1	1	1	1	1	1	1	90
12	0	0.042811	0	1	0	0	0	0	0	0	0	0	0	0	4
13	0	0.053559	0	1	0	0	0	0	0	0	0	0	0	0	5
14	1	0.221836	0	1	1	1	0	0	0	0	0	0	0	0	22
15	1	0.819214	1	1	1	- 1	1	1	1	1	1	1	0	1	82
16	0	0.189574	0	1	1	0	0	0	0	0	0	0	0	0	19
17	0	0.053559	0	1	0	0	0	0	0	0	0	0	0	0	5
18	1	0.851674	1	1	1	1	1	1	1	1	1	1	0	1	85
19	0	0.211770	0	1	1	1	0	0	0	0	0	0	0	0	21

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:

The business may call all the leads that have a conversion probability (value = 1 highlighted in yellow) under column 0.7 in order to reduce the number of pointless phone calls. On the other hand, if the model incorrectly projected that a lead would not convert, we can miss out on those that actually do. (In the image below, red highlights can be seen.) Since that the goal has already been reached, there should be little cause for alarm.

	Converted	Converted_prob	predicted	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	8.0	0.9	final_predicted	Lead_Score
0	1	0.885492	1	1	1	1	1	1	1	1	1	1	0	1	89
1	0	0.033464	0	1	0	0	0	0	0	0	0	0	0	0	3
2	1	0.211770	0	1	1	1	0	0	0	0	O	0	0	0	21
3	0	0.171256	0	1	1	0	0	0	0	0	0	0	0	0	17
4	O	0.545298	1	1	1	1	1	1	1	0	0	0	0	1	55
5	0	0.584672	1	1	1	1	1	1	1	0	0	0	0	1	58
6	0	0.378097	0	1	1	1	1	0	0	0	0	0	0	1	38
7	0	0.108908	0	1	1	0	0	0	0	0	0	0	0	0	11
8	0	0.027781	0	1	0	0	0	0	0	0	0	0	0	0	3
9	0	0.416954	0	1	1	1	1	1	0	0	0	0	0	1	42
10	0	0.047597	0	1	0	0	0	0	0	0	0	0	0	0	5
11	1	0.903612	1	1	1	1	1	1	1	1	1	1	1	1	90
12	0	0.042811	0	1	0	0	0	0	0	0	0	0	0	0	4
13	0	0.053559	0	1	0	0	0	0	0	0	0	0	0	0	5
14		0.221836	0	1	1	1	0	0	0	0	6	0	0	0	22
15	1	0.819214	1	1	1	1	1	1	1	1	1	1	0	1	82
16	0	0.189574	0	1	1	0	0	0	0	0	0	0	0	0	19
17	0	0.053559	0	1	0	0	0	0	0	0	0	0	0	0	5
18	1	0.851674	1	1	1	1	1	1	1	1	1	1	0	1	85
19	0	0.211770	0	1	1	1	0	0	0	0	0	0	0	0	21