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

    The top three variables that contribute most towards the probability of a lead getting converted:
    - Total Time Spent on Website
    - Lead Add Form (from Lead Origin)
    - Had a Phone Conversation (from Last Notable Activity)

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

    The following are the top three categorical/dummy variables that should be focused the most to increase the probability of lead conversion:
    - Lead Add Form (from Lead Origin)
    - Had a Phone Conversation (from Last Notable Activity)
    - Working Professional (from What is your current occupation)

3. X Education has a period of 2 months every year during which they hire some interns. The sales team 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 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 0.3 (column 0.3 highlighted in yellow).

	Converted	Converted_Prob	LeadId	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	0.600894	2240	1	1	1	1	1	1	1	1	0	0	0	1	60
1	0	0.794876	113	1	1	1	1	1	1	1	1	1	0	0	1	79
2	1	0.802664	4132	1	1	1	1	1	1	1	1	1	1	0	1	80
3	0	0.089476	5573	0	1	0	0	0	0	0	0	0	0	0	0	9
4	0	0.029809	1109	0	1	0	0	0	0	0	0	0	0	0	0	3
5	0	0.041753	2282	0	1	0	0	0	0	0	0	0	0	0	0	4
6	1	0.767093	2976	1	1	1	1	1	1	1	1	1	0	0	1	77
7	0	0.418665	8431	0	1	1	1	1	1	0	0	0	0	0	1	42
8	1	0.805010	2770	1	1	1	1	1	1	1	1	1	1	0	1	81
9	1	0.995568	5790	1	1	1	1	1	1	1	1	1	1	1	1	100
10	1	0.950498	2943	1	1	1	1	1	1	1	1	1	1	1	1	95
11	0	0.197985	1196	0	1	1	0	0	0	0	0	0	0	0	0	20
12	1	0.648304	8874	1	1	1	1	1	1	1	1	0	0	0	1	65
13	0	0.106911	1491	0	1	1	0	0	0	0	0	0	0	0	0	11
14	0	0.110507	7676	0	1	1	0	0	0	0	0	0	0	0	0	11
15	1	0.490611	8750	0	1	1	1	1	1	0	0	0	0	0	1	49
16	1	0.805010	5049	1	1	1	1	1	1	1	1	1	1	0	1	81
17	0	0.648304	5691	1	1	1	1	1	1	1	1	0	0	0	1	65
18	1	0.380602	5773	0	1	1	1	1	0	0	0	0	0	0	1	38
19	0	0.032619	3906	0	1	0	0	0	0	0	0	0	0	0	0	3

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.

    In order to minimize the rate of useless phone calls, the company may contact all the leads which have a conversion probability (value = 1 highlighted in yellow color) under column 0.7. However, the flipside here would be that we may miss out on those leads that are converted but then the model wrongly predicted them as not converted. (See red highlights in the image below). This should not be a major cause for concern as the target has already been achieved.

	Converted	Converted_Prob	LeadId	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	0.600894	2240	1	1	1	1	1	1	1	1	0	0	0	1	60
1	0	0.794876	113	1	1	1	1	1	1	1	1	1	0	0	1	79
2	1	0.802664	4132	1	1	1	1	1	1	1	1	1	1	0	1	80
3	0	0.089476	5573	0	1	0	0	0	0	0	0	0	0	0	0	9
4	0	0.029809	1109	0	1	0	0	0	0	0	0	0	0	0	0	3
5	0	0.041753	2282	0	1	0	0	0	0	0	0	0	0	0	0	4
6	1	0.767093	2976	1	1	1	1	1	1	1	1	1	0	0	1	77
7	0	0.418665	8431	0	1	1	1	1	1	0	0	0	0	0	1	42
8	1	0.805010	2770	1	1	1	1	1	1	1	1	1	1	0	1	81
9	1	0.995568	5790	1	1	1	1	1	1	1	1	1	1	1	1	100
10	1	0.950498	2943	1	1	1	1	1	1	1	1	1	1	1	1	95
11	0	0.197985	1196	0	1	1	0	0	0	0	0	0	0	0	0	20
12	1	0.648304	8874	1	1	1	1	1	1	1	1	0	0	0	1	65
13	0	0.106911	1491	0	1	1	0	0	0	0	0	0	0	0	0	11
14	0	0.110507	7676	0	1	1	0	0	0	0	0	0	0	0	0	11
15	1	0.490611	8750	0	1	1	1	1	1	0	0	0	0	0	1	49
16	1	0.805010	5049	1	1	1	1	1	1	1	1	1	1	0	1	81
17	0	0.648304	5691	1	1	1	1	1	1	1	1	0	0	0	1	65
18	1	0.380602	5773	0	1	1	1	1	0	0	0	0	0	0	1	38
19	0	0.032619	3906	0	1	0	0	0	0	0	0	0	0	0	0	3