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

   Ans. 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 :

   - ➔ Total Time spent on Website
   - ➔ LeadOrigin_Lead Add Form
   - ➔ CurrentOccupation_Working Professional

	coef
const	-1.8939
Do Not Email	-1.1637
TotalVisits	1.1520
Total Time Spent on Website	4.5715
LeadOrigin_Landing Page Submission	-0.3888
LeadOrigin_Lead Add Form	3.5791
LeadSource_Olark Chat	1.3591
LeadSource_Welingak Website	2.0678
LastActivity_Not Sure	-1.3039
LastActivity_Olark Chat Conversation	-1.0102
LastActivity_SMS Sent	1.2346
CurrentOccupation_No Information	-1.2098
CurrentOccupation_Working Professional	2.3569
LastNotableActivity_Modified	-0.7982
LastNotableActivity_Page Visited on Website	-0.5310
LastNotableActivity_Unreachable	1.6032

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?

   Ans. Again, based on the coefficient values 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 :

   a) Lead Add Form (from Lead Origin)
   b) Total Time spent on website
   c) 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, 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.

Ans. In the below image, the final prediction is calculated based on a 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
0	0	0.060446	5493	0	1	0	0	0	0	0	0	0	0	0
1	0	0.092212	8064	0	1	0	0	0	0	0	0	0	0	0
2	0	0.027895	4716	0	1	0	0	0	0	0	0	0	0	0
3	0	0.369405	9117	0	1	1	1	1	0	0	0	0	0	0
4	1	0.472983	2402	0	1	1	1	1	1	0	0	0	0	0
5	0	0.027844	1796	0	1	0	0	0	0	0	0	0	0	0
6	0	0.027844	1120	0	1	0	0	0	0	0	0	0	0	0
7	0	0.051432	253	0	1	0	0	0	0	0	0	0	0	0
8	0	0.124955	1491	0	1	1	0	0	0	0	0	0	0	0
9	1	0.337440	2004	0	1	1	1	1	0	0	0	0	0	0
10	0	0.250050	1792	0	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.

Ans. 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 actually 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 be 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	f
0	0	0.060446	5493	0	1	0	0	0	0	0	0	0	0	0	
1	0	0.092212	8064	0	1	0	0	0	0	0	0	0	0	0	
2	0	0.027895	4716	0	1	0	0	0	0	0	0	0	0	0	
3	0	0.369405	9117	0	1	1	1	1	0	0	0	0	0	0	
4	1	0.472983	2402	0	1	1	1	1	1	0	0	0	0	0	
5	0	0.027844	1796	0	1	0	0	0	0	0	0	0	0	0	
6	0	0.027844	1120	0	1	0	0	0	0	0	0	0	0	0	
7	0	0.051432	253	0	1	0	0	0	0	0	0	0	0	0	
8	0	0.124955	1491	0	1	1	0	0	0	0	0	0	0	0	
9	1	0.337440	2004	0	1	1	1	1	0	0	0	0	0	0	
10	0	0.250050	1792	0	1	1	1	0	0	0	0	0	0	0	
11	0	0.087615	1944	0	1	0	0	0	0	0	0	0	0	0	
12	0	0.033313	3879	0	1	0	0	0	0	0	0	0	0	0	
13	0	0.273234	4084	0	1	1	1	0	0	0	0	0	0	0	
14	0	0.111423	1338	0	1	1	0	0	0	0	0	0	0	0	
15	1	0.843593	4371	1	1	1	1	1	1	1	1	1	1	0	
16	0	0.167280	6941	0	1	1	0	0	0	0	0	0	0	0	
17	0	0.217292	6600	0	1	1	1	0	0	0	0	0	0	0	
18	0	0.012775	6918	0	1	0	0	0	0	0	0	0	0	0	