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

   Answer :

   a. Total Time Spent on Website
   b. Lead Origin
   c. 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?**

   Answer :

Dep. Variable:	Converted	No. Observations:	6205
Model:	GLM	Df Residuals:	6191
Model Family:	Binomial	Df Model:	13
Link Function:	Logit	Scale:	1.0000
Method:	IRLS	Log-Likelihood:	-2491.1
Date:	Sun, 13 Nov 2022	Deviance:	4982.1
Time:	20:35:29	Pearson chi2:	6.42e+03
No. Iterations:	7	Pseudo R-squ. (CS):	0.4109
Covariance Type:	nonrobust		

	coef	std err	z	P>|z|	[0.025	0.975]
const	-1.6633	0.061	-27.276	0.000	-1.783	-1.544
Total Time Spent on Website	1.0916	0.041	26.330	0.000	1.010	1.173
Lead Origin_Lead Add Form	3.1847	0.226	14.118	0.000	2.743	3.627
Lead Origin_Lead Import	1.1809	0.550	2.147	0.032	0.103	2.259
Lead Source_Olark Chat	1.3203	0.107	12.342	0.000	1.111	1.530
Lead Source_Welingak Website	2.7448	0.756	3.629	0.000	1.263	4.227
Do Not Email_1	-1.5516	0.180	-8.638	0.000	-1.904	-1.200
Last Activity_Converted to Lead	-0.9454	0.212	-4.455	0.000	-1.361	-0.529
Last Activity_Had a Phone Conversation	1.8029	0.677	2.662	0.008	0.475	3.130
Last Activity_Olark Chat Conversation	-1.4766	0.170	-8.692	0.000	-1.810	-1.144
Last Activity_SMS Sent	1.3493	0.077	17.420	0.000	1.198	1.501
What is your current occupation_Working Professional	2.6399	0.200	13.194	0.000	2.248	3.032
Lead Profile_Potential Lead	1.7266	0.100	17.339	0.000	1.531	1.922
Lead Profile_Student of SomeSchool	-1.7922	0.444	-4.040	0.000	-2.662	-0.923

   a. Lead Origin_Lead Add Form :
      The people who have fill the form are most likely to take the course in X education.
   b. Lead Source_Welingak Website :
      The people who got from wellingak website is most ‘hot lead’ because it is providing people with mostly positive review.
   c. What is your current occupation_Working Professional :
      Working professional can afford the course and also they require course to move forward in their career .

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 ?**

Answer :

	converted	convert_prob	Lead Number	predicted	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0	1	0.714073	331	1	1	1	1	1	1	1	1	1	0	0
1	0	0.604091	8861	1	1	1	1	1	1	1	1	0	0	0
2	1	0.511324	7080	1	1	1	1	1	1	1	0	0	0	0
3	0	0.213490	4638	0	1	1	1	0	0	0	0	0	0	0
4	1	0.509968	4472	1	1	1	1	1	1	1	0	0	0	0

Probability Cut-off

	prob	accuracy	sensi	speci
0.0	0.0	0.384045	1.000000	0.000000
0.1	0.1	0.644641	0.966429	0.444008
0.2	0.2	0.735858	0.934536	0.611983
0.3	0.3	0.804835	0.846832	0.778650
0.4	0.4	0.820467	0.783466	0.843537
0.5	0.5	0.819823	0.724297	0.879383
0.6	0.6	0.807091	0.626941	0.919414
0.7	0.7	0.790975	0.535040	0.950549
0.8	0.8	0.767123	0.439362	0.971481
0.9	0.9	0.725222	0.300881	0.989796

Probability Cut-off

We can set the **threshold probability** as **lower** as possible.So,the more customers will be into the true positive.With that we can use following variables to increase the customer conversion.

We can use the following variables :

1. Olark chat
2. Sending SMS
3. Having telephonic conversions with customers.

With mostly targeting the ‘working professionals’ customers.

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.?

Answer :

We can **increase** or set as **high** as possible the **threshold of the conversion probability**,So, it will increase true negative means it will provide the high convert probability customer.So,company can minimize the rate of useless phone call.