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

   Answer: -   The top three variables in our model which contributed most towards the probability of a lead getting converted are following:

   ➢ Lead Origin_lead add form
   ➢ What is your current occupation_working professional
   ➢ Last Notable Activity_had a phone conversation

   It's based upon their co-efficient values highlighted below.


   ```
   In [99]: X_train_sm,res6 = createmodel(X_train[selected_features])
                          Generalized Linear Model Regression Results
   ==============================================================================
   Dep. Variable:             Converted   No. Observations:              6320
   Model:                           GLM   Df Residuals:                  6304
   Model Family:               Binomial   Df Model:                        15
   Link Function:                 Logit   Scale:                       1.0000
   Method:                         IRLS   Log-Likelihood:             -2563.6
   Date:              Mon, 20 Mar 2023   Deviance:                    5127.1
   Time:                       23:30:26   Pearson chi2:              6.50e+03
   No. Iterations:                    7   Pseudo R-squ. (CS):          0.4045
   Covariance Type:           nonrobust
   ==============================================================================
                                               coef   std err        z    P>|z|    [0.025    0.975]
   ------------------------------------------------------------------------------
   const                                    -2.1031     0.094  -22.391    0.000    -2.287    -1.919
   Do Not Email                             -1.2873     0.181   -7.117    0.000    -1.642    -0.933
   Total Time Spent on Website               1.1103     0.041   27.208    0.000     1.030     1.190
   Lead Origin_lead add form                 3.5453     0.202   17.578    0.000     3.150     3.941
   Lead Source_olark chat                    1.2642     0.103   12.283    0.000     1.062     1.466
   Lead Source_welingak website             2.0857     0.745    2.801    0.005     0.626     3.545
   Last Activity_sms sent                    1.2975     0.077   16.929    0.000     1.147     1.448
   Last Activity_unsubscribed                0.9876     0.480    2.059    0.039     0.048     1.928
   What is your current occupation_other     1.2778     0.676    1.890    0.059    -0.047     2.603
   What is your current occupation_student   1.2066     0.231    5.231    0.000     0.754     1.659
   What is your current occupation_unemployed 1.1602    0.088   13.185    0.000     0.988     1.333
   What is your current occupation_working professional 3.5155 0.194 18.096 0.000 3.135 3.896
   Last Notable Activity_had a phone conversation 3.4000 1.111  3.061    0.002     1.223     5.577
   Last Notable Activity_modified           -0.9693     0.080  -12.164    0.000    -1.126    -0.813
   Last Notable Activity_olark chat conversation -1.2168 0.322  -3.781    0.000    -1.848    -0.586
   Last Notable Activity_unreachable         1.6603     0.556    2.986    0.003     0.571     2.750
   ==============================================================================
   ```

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: - 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 are the following:

   ➢ Lead Origin_lead add form
   ➢ What is your current occupation_working professional
   ➢ Last Notable Activity_had a phone conversation

The above 3 variables had the highest conversion rate based upon their coefficient. So focusing on them more should lead to more conversion rate.

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: - To achieve their goal of converting almost all potential leads during the 2-month intern period, X Education should consider employing the following strategy:

 ➢ Lower the threshold for Conversion Probability: By lowering the threshold for Conversion Probability, the model will classify more potential leads as "1," increasing the number of leads that the sales team can target. This will enable them to call more potential leads and increase the chances of converting them.

 ➢ Use a personalized approach: The sales team should tailor their approach to each potential lead, based on their interests and preferences. This can be achieved by analyzing the lead's behavior on the website, the pages they visited, and the forms they filled out. Personalization can improve the chances of converting a lead.

 ➢ Increase the frequency of follow-ups: The sales team should increase the frequency of follow-up calls to potential leads. By staying in touch with potential customers, they can build relationships, answer questions, and provide relevant information. This can help to build trust and increase the likelihood of conversion.

 ➢ Utilize multiple communication channels: The sales team should also consider using multiple communication channels, such as email, social media, and text messaging, in addition to phone calls. This will allow them to reach potential leads through their preferred channels and increase the chances of engagement and conversion.

By employing these strategies, X Education can maximize their chances of converting almost all potential leads during the 2-month intern period.

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: - To minimize the rate of useless phone calls during a period where the company has already reached its sales target for the quarter, the following strategy can be employed:

➢ Focus on high-potential leads: The sales team should focus their efforts on leads that are more likely to convert. This can be achieved by analyzing the lead's behavior and engagement with the company, such as their interest in specific products or services, and their response to previous communication attempts. This will help to ensure that the sales team is spending their time on leads that are more likely to result in conversions.

➢ Use a more targeted approach: Instead of making cold calls, the sales team should utilize a more targeted approach, such as sending personalized emails or offering customized product or service recommendations based on the lead's interests and preferences. This can help to build stronger relationships with potential customers and increase the chances of conversion.

➢ Use automation tools: The sales team can also use automation tools, such as chatbots or automated email sequences, to handle routine queries and communications with potential leads. This will free up the sales team's time, allowing them to focus on higher-priority tasks.

➢ Focus on building relationships: During this time, the sales team should focus on building relationships with potential leads and existing customers. By focusing on providing value, offering support, and building trust, the company can increase customer loyalty and improve the chances of future conversions.

By employing these strategies, the company can minimize the rate of useless phone calls during a period where their sales target has already been met, while also focusing on other high-priority tasks, such as building relationships and improving customer satisfaction.