

**Question 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 significantly influence the probability of lead conversion, as determined by Recursive Feature Elimination (RFE) and logistic regression analysis, are:

1. Total Time Spent on Website: This variable has the strongest effect on lead conversion. Increased time spent on the site suggests a higher level of interest and engagement, which positively impacts the likelihood of conversion.
2. Lead Origin\_Lead Add Form: Leads from this source demonstrate a notably higher conversion rate, indicating a clear intent to enroll or seek more information.
3. TotalVisits: While its influence is not as strong as the first two, this variable remains important, as a higher number of visits generally correlates with greater engagement, thereby increasing conversion chances.

**Question 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?

The top three categorical/dummy variables to prioritize for enhancing lead conversion are:

1. Lead Origin\_Lead Add Form: Both the RFE and logistic regression results indicate that this variable has a significant impact on conversion. Focusing on leads generated through this source is likely to produce better outcomes.
2. Last Activity\_SMS Sent: The model shows that leads receiving an SMS have a higher likelihood of conversion, making SMS outreach an effective strategy.

3. Lead Source\_Olark Chat: This source is linked to higher conversion rates, suggesting that engaging with leads through live chat positively influences conversion.

Additionally, the variable Last Notable Activity\_Unreachable should be deprioritized, as it does not contribute meaningful insights and may introduce noise into the model.

**Question 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.

During the intern hiring period, X Education can implement the following strategy to maximize lead conversion:

1. Prioritize High-Conversion Channels: Focus outreach efforts on leads from high-converting sources, such as Lead Origin\_Lead Add Form and Lead Source\_Olark Chat, which have shown a strong correlation with conversion.
2. Leverage SMS Communication: Since Last Activity\_SMS Sent is a key predictor of conversion, sending personalized SMS messages before making phone calls can enhance engagement and prepare leads for a follow-up conversation.
3. Segment Leads by Engagement Levels: Rank leads based on engagement metrics like Total Time Spent on Website and TotalVisits. Prioritize contacting those with higher engagement, as they are more likely to convert through direct phone calls.

This strategy ensures that interns focus their efforts on leads with the highest potential for conversion, optimizing the use of available resources.

**Question 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.

When X Education reaches its quarterly target and aims to minimize unnecessary phone calls, the following strategy should be employed:

1. **Prioritize High-Engagement Leads:** Limit calls to leads demonstrating significant engagement. Establish thresholds based on metrics like Total Time Spent on Website and TotalVisits to identify those most likely to convert.
2. **Utilize Digital Communication:** Focus on non-intrusive outreach methods such as SMS and email follow-ups, particularly for leads with activities like Last Activity\_SMS Sent or Last Activity\_Email Opened, which indicate a higher likelihood of conversion.
3. **Avoid Low-Converting Activities:** Steer clear of contacting leads with last activities indicating low engagement, such as Last Notable Activity\_Unreachable, as these are less likely to convert based on model insights.

By concentrating on high-potential leads and minimizing unnecessary outreach, the sales team can optimize their efforts while ensuring effective lead engagement.

