

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

A. The top three variables contributing most toward the probability of lead conversion, as identified through Recursive Feature Elimination (RFE) and the logistic regression model output, are:

Total Time Spent on Website: This feature shows the most significant impact on lead conversion. A higher time spent on the website indicates greater interest and engagement, which increases the likelihood of conversion.

Lead Origin\_Lead Add Form: Leads generated through this origin tend to have a much higher conversion rate. This reflects a clear intent to enroll or inquire further.

TotalVisits: Although not as significant as the other two, this feature still plays a crucial role, as more visits often correlate with higher engagement, leading to conversion.

**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?**

A. The top three categorical/dummy variables that should be focused on for improving lead conversion are:

Lead Origin\_Lead Add Form: As seen in both the RFE and logistic regression results, this variable has one of the highest impacts on conversion, indicating that focusing on leads generated through this form will likely yield better results.

Last Activity\_SMS Sent: According to the model, leads that receive an SMS are more likely to convert, making SMS outreach a powerful tool.

Lead Source\_Olark Chat: This source is associated with higher conversion rates, suggesting that interaction through live chat contributes positively to conversion.

The variable Last Notable Activity\_Unreachable should indeed be deprioritized as it does not add value and may represent noise or a flaw in the model.

**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.**

A. During the intern hiring period, where X Education wishes to aggressively convert leads, the following strategy should be employed:

Focus on high-conversion channels: Prioritize reaching out to leads from high-converting sources like Lead Origin\_Lead Add Form and Lead Source\_Olark Chat.

Utilize the SMS channel: Since Last Activity\_SMS Sent is a strong predictor of conversion, sending personalized SMS messages before following up with a phone call can increase engagement.

Segment leads based on engagement: Prioritize leads with higher engagement metrics (i.e., Total Time Spent on Website and TotalVisits). These leads should be at the top of the call list, as they are more likely to convert with a direct phone call.

This approach ensures interns focus on leads with the highest likelihood of conversion, making the best use of available resources.

- 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.**

A. When X Education reaches its target for the quarter and wants to minimize unnecessary phone calls, the strategy should be:

Limit calls to high-priority leads: Only focus on leads that have shown significant engagement. Utilize thresholds based on Total Time Spent on Website and TotalVisits to identify leads that are most likely to convert.

Rely on digital channels: Utilize non-intrusive methods such as SMS and email follow-ups, especially for leads associated with activities like Last Activity\_SMS Sent or Last Activity\_Email Opened, which have higher conversion probabilities.

Reduce outreach to low-converting activities: Avoid contacting leads whose last activities involve interactions like Last Notable Activity\_Unreachable, as these have a lower chance of conversion, based on the model's outputs.

By focusing on these high-probability leads and reducing unnecessary outreach, the sales team can optimize their resources while maintaining effective lead engagement.