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

   Answer:
   Top three variables in your model which contribute most towards the probability of a lead getting converted with their coefficients:
   - *TotalVisits*   8.985
   - *Total Time Spent on Website*   4.625
   - *Lead_Source_Welingak Website*   4.272

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:
   Top 3 categorical/dummy variables in the model which should be focused the most on in order to increase the probability of lead conversion with their coefficients:
   - *Lead_Source_Welingak Website*   4.272
   - *Lead_Source_Reference*   2.704
   - *Last_Notable_Activity_Page Visited on Website*   -1.876

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:
   The primary objective is to maximize the conversion rate among potential leads, especially those predicted as 1 by the model. To achieve this, employing a customized approach utilizing the Optimal Cutoff Point is recommended.

   Given the business context, the Optimal Cutoff Point at 0.37 can be strategically leveraged. This point signifies the threshold at which the balance between precision and recall is optimized for the company's specific objectives. By setting the cutoff threshold at 0.37, the sales team can capitalize on the model's predictions to identify and target potential leads with a higher likelihood of conversion.

   The lower threshold of 0.37 aligns with the company's aggressive conversion strategy during the intern hiring phase. This approach will result in a greater proportion of positive predictions being classified as 'converted.' Consequently, the sales team can channel

their resources more efficiently and make phone calls to a larger segment of potential leads who have a higher probability of conversion.

By adapting the Optimal Cutoff Point to 0.37 during this intensified phase, X Education can maximize its conversion efforts. This strategy is expected to lead to a higher conversion rate among potential leads, capitalize on the increased workforce of interns, and ultimately contribute to achieving the desired business goals during the crucial intern hiring 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:
In such scenarios, the sales team's objectives evolve, emphasizing efficiency and resource optimization. To align with this approach, a tailored strategy involving the Precision and Recall Tradeoff at a threshold of 0.42 is recommended.

With a goal to minimize unnecessary phone calls and maximize efficiency, setting the threshold at 0.42 in the Precision and Recall Tradeoff allows X Education to strike a balance between precision and recall that aligns with its objectives. At this threshold, the emphasis is on precision, which means that the model will prioritize making calls to potential leads that are most likely to convert, even if this leads to a reduction in recall.

By prioritizing precision, the sales team can focus their efforts on prospects who have a higher likelihood of conversion, ensuring that the calls they make have a higher chance of resulting in positive outcomes. This strategy minimizes the rate of ineffective phone calls, as the model is designed to be more cautious in its predictions, resulting in fewer false positive predictions.

Implementing the Precision and Recall Tradeoff at a threshold of 0.42 during target-achieved quarters ensures that the sales team's efforts are concentrated on valuable opportunities and tasks. This strategy maximizes efficiency, conserves resources, and maintains the company's momentum in exploring new avenues while minimizing the disruption caused by unnecessary outreach efforts.