Subjective Questions

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

   Based on the first model built, the top three variables that contribute the most to the probability of conversion based on the magnitude of their coefficients.

   - **"Total Time Spent on Website"** has the highest positive coefficient of **1.1224**, meaning that it has a strong positive impact on the likelihood of conversion. The more time a lead spends on the website, the more likely they are to convert.
   - **"Lead Origin"** with a coefficient of **0.6483** also significantly contributes to the conversion probability.
   - **"What is your current occupation"** with a coefficient of **0.6456** is another important feature contributing positively to conversion likelihood.

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?

   Based on the first model,the top three categorical variables that should be focused on probability of lead conversion are:

   - **"Tags_grouped"** with a coefficient of **0.7197**: This indicates that certain tags (probably related to how the lead interacted or responded to marketing) are strongly associated with higher conversion probability.

   - **"Lead Origin"** with a coefficient of **0.6483**: This represents from which the customer was identified to be lead.

   - **"What is your current occupation"** with a coefficient of **0.6456** is another important feature contributing positively to conversion likelihood.

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.

Objective: The company wants to maximize lead conversions and contact as many potential leads (predicted as 1 by the model) as possible. This is during a 2-month period when they have extra resources (interns) to contact leads.

Lead Conversion Rate: During this phase, the goal is to **increase the conversion rate** by reaching out to **almost all predicted positive leads** (i.e., leads predicted as "1" by the model). The company should aim to contact as many leads as possible to **maximize opportunities**.

Strategy:

- **Lower the decision threshold:** The company may want to lower the threshold for predicting conversions (e.g., from 0.5 to 0.3 or 0.4). This will increase the number of leads flagged as "converted" (1), so more leads will be contacted by the interns.

- **Focus on predicted positive leads:** Since the company has more resources (interns), they can reach out to as many leads predicted to convert by the model, even if the predicted probability of conversion is lower. This allows the sales team to target a larger pool of leads.

- **Metrics to monitor**: In this phase, it's important to monitor the conversion rate, but also keep an eye on precision (to avoid wasting resources on false positives) and recall (to ensure that the company is reaching as many leads as possible).

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.

    Objective: The company wants to **minimize wasted efforts** by reducing phone calls, focusing only on leads that are highly likely to convert. This is during a period when the company has reached its quarterly target, and they don't need to aggressively contact leads unless it's necessary.

    Lead Conversion Rate: In this case, the company may want to **focus on high-quality leads** and minimize the number of **false positives** (leads that are predicted to convert but actually do not). This means they would want to **increase precision** and be more selective in targeting leads. The goal would be to **target only those leads with a very high probability of conversion**.

    Strategy:

    - **Increase the decision threshold**: To minimize unnecessary phone calls, the company could **raise the threshold** for predicting leads as converted (e.g., from 0.5 to 0.7 or 0.8). This would ensure that only leads with a very high likelihood of conversion are flagged as positive (i.e., leads with a high probability of converting).

    - **Focus on high confidence predictions**: By increasing the threshold, the company can focus on leads that have a **higher chance of converting**, which reduces the risk of spending resources on leads that are unlikely to convert.

    - **Metrics to monitor**: In this phase, it's important to monitor that high probability leads are being targeted, but also keep an eye on precision (to avoid wasting resources on false positives).