**Assignment Subjective Questions and Answers**

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

Based on the logistic regression model trained on the lead dataset, the top three variables contributing most to conversion are:

1. What is your current occupation.
2. Lead Origin.
3. Last Notable Activity.
4. **What are the top 3 categorical/dummy variables in the model which should be focused the most on to increase the probability of lead conversion?**

From the one-hot encoded categorical variables in your model, the top 3 dummy variables that most strongly predict conversion are:

1. What is your current occupation\_Working Professional. **(Coeff +2.63)**
2. Lead Origin\_Lead Add Form. **(Coeff +1.49)**
3. Last Notable Activity\_Had a Phone Conversation. **(Coeff +1.40)**
4. **X Education has a period of 2 months every year during which they hire some interns. The sales team 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 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.**

Aggressive Sales Mode Strategy (Intern Period – Focus on High Recall)

During intern hiring months, X Education should:

1. **Lower the lead scoring threshold** from the default (0.5) to ~0.3, increasing recall and capturing more potential leads.

2. Use this **broader pool of predicted 1s** to call as many promising leads as possible.

3. Accept a higher false positive rate (more calls) to ensure no good lead is missed.

This strategy maximizes recall (don't miss hot leads), even if precision drops a bit.

1. **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.**

Conservative Mode Strategy (When Quarterly Target is Met – Focus on High Precision)

During quieter periods, the company should:

1. **Raise the lead scoring threshold to ~0.7** to reduce the number of predicted 1s.

2. This will **increase precision**—ensuring the few leads contacted are highly likely to convert.

3. Significantly reduce the number of unnecessary calls while maintaining a lean conversion stream.

This strategy maximizes **precision**, ensuring only the hottest leads are contacted.