

# Assignment Subjective Questions

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

Ans: The top three variables in the model with the highest positive coefficients, which contribute the most towards the probability of a lead getting converted, are:

- **Total Time Spent on Website** (Coefficient: 3.857843): Leads spending more time on the website are highly engaged and more likely to convert into customers.
- **What is your current occupation\_Working Professional** (Coefficient: 3.602588): Working professionals have a greater likelihood of conversion, suggesting that the courses are highly relevant to this group.
- **Lead Origin\_Lead Add Form** (Coefficient: 3.387802): Leads coming from Lead Add Forms tend to convert more, indicating that this origin attracts higher-quality prospects.

Feature	Coefficient
Total Time Spent on Website	3.857843
What is your current occupation_Working Profes...	3.602588
Lead Origin_Lead Add Form	3.387802
const	-2.649388
Last Notable Activity_Unreachable	1.808899
Do Not Email_Yes	-1.598078
Last Activity_Converted to Lead	-1.383438
What is your current occupation_Student	1.368223
Last Activity_SMS Sent	1.193393
What is your current occupation_Unemployed	1.166086
Last Activity_Olark Chat Conversation	-1.032249
Lead Source_Direct Traffic	-0.559630

## **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?**

Ans: The top three categorical variables (dummy variables) that should be focused on to increase lead conversion are:

- **What is your current occupation\_Working Professional** (Coefficient: 3.602588): Working professionals have a greater likelihood of conversion, suggesting that the courses are highly relevant to this group.
- **Lead Origin\_Lead Add Form** (Coefficient: 3.387802): Leads coming from Lead Add Forms tend to convert more, indicating that this origin attracts higher-quality prospects.
- **Last Notable Activity\_Unreachable** (Coefficient: 1.808899): Despite being initially unreachable, these leads may still show interest and have potential for conversion with persistent follow-up.

## **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.**

Ans: when the company wants to aggressively convert as many leads as possible, the sales team should focus on leads with a high probability of conversion (predicted as 1 by the model). A good strategy would be to:

- Prioritize contacting leads who have spent significant time on the website and are working professionals, as these are strong indicators of conversion potential.

- Ensure immediate follow-ups on leads generated from **Lead Add Forms** and any potential customers marked as "Unreachable" in the last notable activity, as their likelihood of conversion is high.
- Assign interns to make phone calls to these high-potential leads, focusing on quick engagement and conversion.
- The final prediction is determined using an optimal cutoff value of **0.35**. To adopt a more aggressive sales approach, the company may reach out to all leads with a conversion probability of **1** that fall below the **0.3** cutoff

	Converted	Conversion_Prob	Predicted	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	final_predicted	Lead_Score
0	0	0.074400	0	1	0	0	0	0	0	0	0	0	0	0	7
1	0	0.294169	0	1	1	1	0	0	0	0	0	0	0	0	29
2	0	0.428026	0	1	1	1	1	1	0	0	0	0	0	1	43
3	1	0.592915	1	1	1	1	1	1	1	0	0	0	0	1	59
4	1	0.869400	1	1	1	1	1	1	1	1	1	1	0	1	87

**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.**

Ans: When the company's target is met, and it wants to minimize unnecessary phone calls, the focus should shift towards leads with a lower probability of conversion. A good strategy would be:

- Only make phone calls to leads with strong conversion indicators like high **Total Time Spent on Website**, or working professionals, and avoid those with lower conversion potential (e.g., leads from **Direct Traffic** or leads with **Do Not Email\_Yes**).

- Automate or use digital communication (like emails or SMS) for leads that are less likely to convert based on the model's predictions, and only engage by phone when absolutely necessary (e.g., for unreachable leads or those with urgent follow-ups).