

## Assignment Subjective Questions:

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

The top three variables with the highest coefficient factors contributing towards the probability of lead conversion in the logistic regression model are:

**Tags Lost to EINS:** Coefficient factor = 9.194818

**Tags Closed by Horizzon:** Coefficient factor = 7.978850

**Lead Source Welingak Website:** Coefficient factor = 3.282453

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?

The top three variables in the model contributing most towards the probability of a lead getting converted are:

**Tags Lost to EINS:** This variable has a positive coefficient factor of 9.194818, indicating a strong positive influence on the likelihood of conversion when this tag is present.

**Tags Closed by Horizzon:** With a positive coefficient factor of 7.978850, this variable also positively impacts the probability of conversion.

**Lead Quality Worst:** Despite its negative coefficient factor of -3.910568, this variable significantly influences the model, suggesting that leads with the worst lead quality are less likely to convert.

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.

To aggressively convert leads during the internship period, X Education should lower the probability cutoff for classifying "hot" leads, allowing for a broader pool of potential conversions. By decreasing the cutoff from 0.19 to 0.1, the company can identify more leads likely to convert. With 10 interns available, intensify outbound calls to this expanded pool, focusing on higher probability leads. Allocate resources efficiently by prioritizing leads with higher scores, ensuring optimal use of intern manpower. Regularly monitor conversion rates and iteratively refine the strategy based on performance, enhancing the effectiveness of lead conversion during the internship phase.

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.**

When the company achieves its quarterly target ahead of schedule, the focus should shift to minimizing unnecessary phone calls. To achieve this, X Education can consider raising the probability cutoff for classifying leads as "hot" during this period. By decreasing the cutoff to 0.7, the sales team can prioritize leads with the highest conversion likelihood, leading to more precise targeting. This strategic adjustment ensures that phone calls are made only when extremely necessary, reducing the rate of outbound calls and avoiding unnecessary communication. Regularly reassess and fine-tune the cutoff to align with changing business dynamics and optimize resource utilization during periods of goal fulfillment.