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

**Answer:**

Top 3 variables are determined by their coefficients which can be assumed as weightage of each variable in determining the odds of conversion. Hence, the top 3 variables would be:

* lead source\_Reference (4.14)
* last activity\_Had a Phone Conversation (1.95)
* last notable activity\_SMS Sent (1.63)

1. **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:**

We can see in the answer of question 1, the top 3 variables are either categorical/dummy variables. Hence, the top 3 categorical/dummy variables would be:

* lead source\_Reference (4.14)
* last activity\_Had a Phone Conversation (1.95)
* last notable activity\_SMS Sent (1.63)

1. **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:**

In the scenario provided by X Education, they would like our model to determine most of the potential leads as hot leads so that the interns can make as many calls as possible.

Here, the goal is to increase the sensitivity of the model so that all the potential leads can be identified as hot leads. Let’s assume that we need to identify at least 90% of the actual leads i.e. the sensitivity is 90% so that conversion is maximum. So, we determine the cut-off conversion probability / lead score which can provide us with 90% sensitivity.

Through model evaluation we know that for optimal cut-off conversion probability of 0.35 we are having a sensitivity of 0.779. So, we need to reduce the cut-off further to predict as many leads as possible as hot leads.

**For a cut-off conversion probability of 0.19/ for lead score >=19, the sensitivity of the model would increase to 90%.**

**Strategy:** We would recommend X Education sales team to contact customers with lead score >=19 as this would enable them in reaching out to 90% of the potential leads.

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.**

**Answer:**

In the scenario provided by X-education, they would like our model to determine hot leads which would surely convert so that the sales team can focus on new work and minimize the rate of useless calls.

Here, our goal is to increase the conversion rate i.e. the precision of the model. From the original business objective, an 80% conversion is achieved if we target customers with lead score >=61 or conversion probability >=0.61.

For a conversion probability >=0.95 / lead score >= 95, the precision of the model increases to 92.8%

**Strategy:** We would recommend X Education sales team to only contact customers with lead score >=95. This would result in 92.8% of chance that the person contacted would result in conversion. This way, the sales team could focus on other work as there wouldn’t be many customers above a lead score of 95.