**Q1. Which are the top three variables in your model which contribute most towards the probability of a lead getting converted?**

Ans:

Top 3 variables which contribute most are:

* Tags\_Will revert after reading the email
* Last Notable Activity\_SMS Sent
* Occupation\_Unemployed

**Q2. 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:

Top 3 categorical/dummy variables which contribute most are:

* Tags\_Will revert after reading the email
* Last Notable Activity\_SMS Sent
* Occupation\_Unemployed

**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:

In this scenario, we will try to **increase the sensitivity** of the model.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Predicted | |
| Actual |  | Converted | Not Converted |
| Converted | True Positive (TP) | False Negative (FN) |
| Not Converted | False Positive (FP) | True Negative (TN) |

Sensitivity = TP / (TP + FN)

We would try to increase the True Positive and decrease the False Negative so that we don’t miss any of the potential leads. For that we can decrease the cutoff score so that Number of True Positive would increase and False Negative would decrease

Cutoff score in the model is 38 and sensitivity is 84.42%, so for increasing the sensitivity we would make cutoff less than 38.

**Q4. 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:

In this scenario, we will try to **increase the precision** (Positive Predictive Power)of the model.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Predicted | |
| Actual |  | Converted | Not Converted |
| Converted | True Positive (TP) | False Negative (FN) |
| Not Converted | False Positive (FP) | True Negative (TN) |

Precision= TP / (TP + FP)

We would try to decrease the False Positive so that we would not call any of the leads who would not convert. For that we can increase the cutoff score so that Number of False Positives would decrease.

Cutoff score in the model is 38 and precision score is 83.87, so for increasing the precision we would make the cutoff more than 38.