

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 your model which contribute most towards the probability of a lead getting converted:

1. Tags
2. Lead Source
3. Last Activity

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 3 categorical/dummy variables in the model which should be focused the most on in order to increase the probability of lead conversion:

- Tags_Closed by Horizzon
- Tags_Lost to EINS
- Tags_Will revert after reading the email
- Lead Source_Welingak Website
- Tags_Busy
- Last Activity_SMS Sent

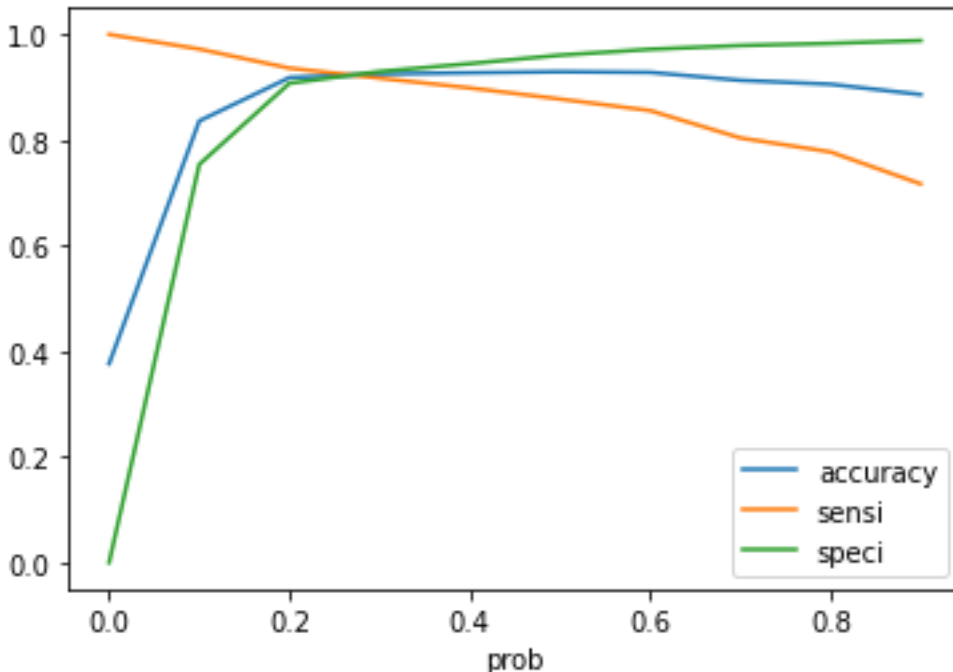
3. X Education has a period of 2 months every year during which they hire some interns. The sales team, in particular, has around 10 interns allotted to them. So during this phase, they wish to make the lead conversion more aggressive. So they want almost all of the potential leads (i.e. the customers 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: The company has a period of 2 months along with around 10 interns allocated for the sales team. During this period they should make sure they call all the customers, send them reminder emails and sms to improve their chance of converting to a potential lead. Apart from focusing on the hot leads, they should focus on the leads that have low lead score and try to improve their lead score and convert them also to hot leads. This can be achieved by using the below strategy.

Sensitivity of a model can be defined as the ratio of the total number of actual conversions correctly predicted to the total number of actual conversion.

Specificity of a model can be defined as the ratio of the total number of actual non - conversions correctly predicted to the total number of actual non-conversion.

For any given model the as one increases the other decreases. Hence it is necessary to maintain a trade off between the two. Based on our requirement we can choose the cut off value. Different values of the sensitivity and specificity can be achieved for the same model by changing the threshold cut off value. Below is the graph we have obtained for the Accuracy Sensitivity and specificity:



When the probability threshold is low, the sensitivity is high and specificity is low. And for large probability threshold, the sensitivity is low and specificity is high. High sensitivity means almost all of the clients who have potential to converted are estimated as converted. Since now the X Education have lot of time, they can follow this approach and choose low probability threshold, there by choosing high sensitivity. They can use their manpower and time to call all these clients and get them converted. Though the conversion rate would be low, the count of conversion would be high in this approach and the revenue generated also increases.

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: During the quarter when the company reaches its target before the deadline, they need not focus on calling all the clients. Instead they can try just focusing on the customers who are hot leads that have higher conversion rate (>80). They can send reminder emails, sms to these potential clients. And they can even focus on calling just these hot leads and try making them join the course.

To achieve the above requirement we can use the below strategy:

For any given model as the specificity increases, the sensitivity decreases and vice versa. Hence it is necessary to maintain a tradeoff between the two.

When the probability threshold is high, the sensitivity is low and specificity is high. High specificity means almost all of the clients who have potential to not get converted are estimated as non-Converted. Since now the X Education have achieved their target, they can follow this approach and choose high probability threshold, there by choosing high specificity. They need

not make unnecessary calls phone calls and emails and focus on new work. The conversion rate would be high ,efficiency of sales team also increases as they use time for other tasks.