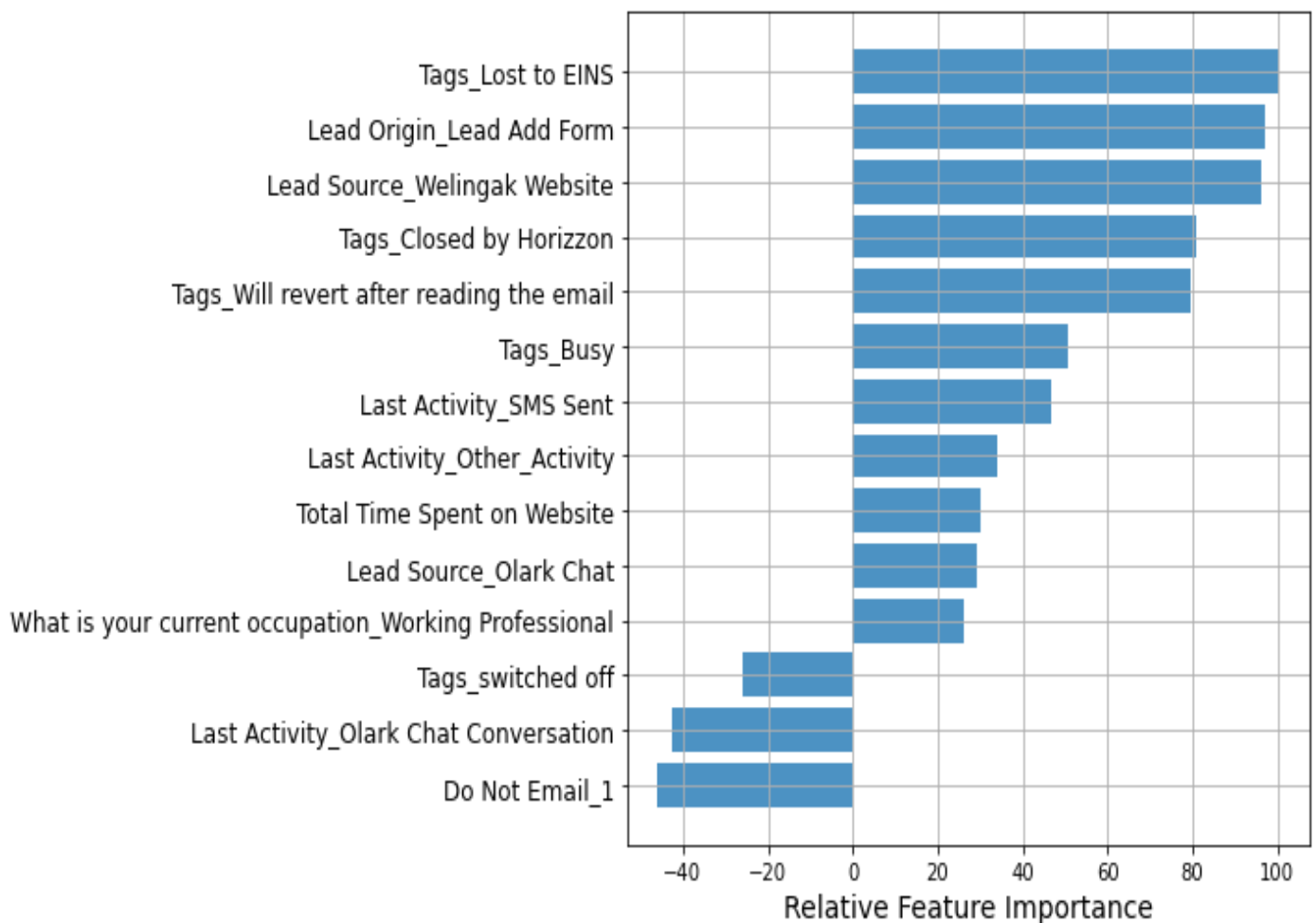


Assignment Subjective Questions

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

Ans. The features which are used to build the model are representing below as per their importance.



From the above graphical representation we can analyze the top3 variables by considering their correlation. The top 3 variables are:

- i) Tags_Lost to EINS
- ii) Lead Origin_Lead Add Form
- iii) Lead Source_Welingak Website

Q2) What are 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. By considering the above graph the we can consider the top3 categorical or dummy variables which are responsible for increase in probability of lead conversion are:

- i) Tags_Lost to EINS
- ii) Lead Origin_Lead Add Form
- iii) Lead Source_Welingak Website

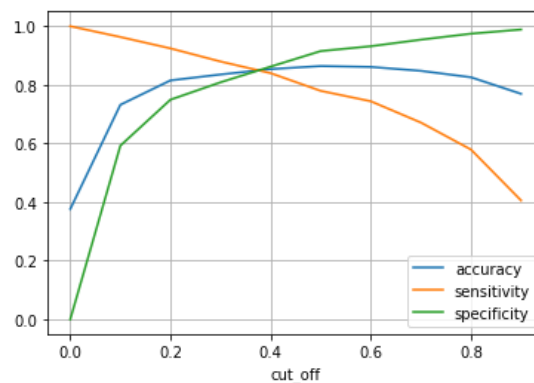
Q3) X Education has a period of 2 months every year during which they hire some interns. The sales team, in particular, has around 10 interns allotted to them. So during this phase, they wish to make the lead conversion more aggressive. So they want almost all of the potential leads (i.e. the customers 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. Sensitivity = $TP / TP + FN$

Specificity = $TN / TN + FP$

Accuracy = $TP+FN/(TP+FP+FN+TN)$

We can get the different values of sensitivity and specificity by choosing different values of cutoff threshold values



This model shows the change in rate of change in values of sensitivity and specificity

As per our requirement the X Education have 2 months interns program. 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. So we can choose a lower threshold value for conversion probability.

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. This problem is as similar to the previous problem so we have to increase the specificity rate because it will give all the leads who are not likely to be convert but it will lose some low conversion leads.

To overcome of loosing some low conversion lead as per problem company has reaches its target for a quarter before the deadline e. During this time, the company wants the sales tam 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, so to solve this problem we can choose higher threshold values for conversion probability. This will cause the high specificity rate this will make sure that leads probability of getting converted or not and agents will not have to be make unnecessary phone calls and they can do their other works.