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

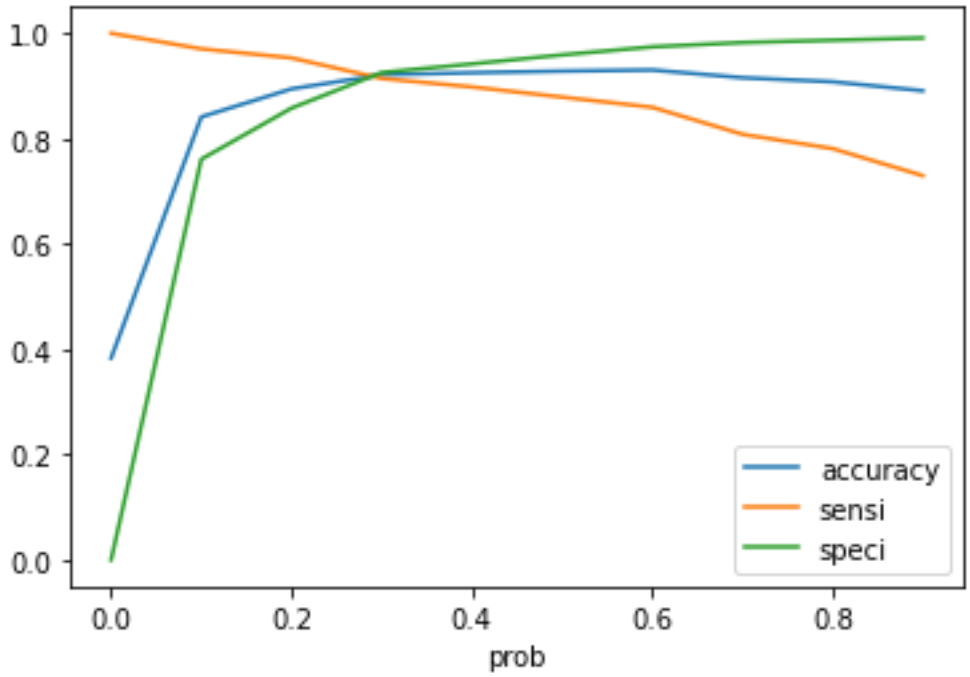
   Top 3 variables contributing most towards leads based on the model built are:
   - Total Time Spent on Website
   - Tags
   - Lead Source

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?**

   Top 3 categorical/dummy variables in the model and based on the EDA /visulaizations which should be focused the most on in order to increase the probability of lead conversion are:
   - Lead Origin_Lead_add_form
   - What is your current occupation_working_professional
   - 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.**

   Sensitivity with respect to our model can be defined as the ratio of predicted conversion by the model to actual total conversion and similarly Specificity can be defined as ratio of predicted non-conversion to actual total non conversion. These values are inversely related to each other i.e if one increases then other decreases and vice-versa. In our model the value of specificity, sensitivity and accuracy is given by the below threshold probability:



If we increase the threshold probability, then the specificity increases and if we decrease the cut-off probability the sensitivity increases
Now since for this period of 2 months there is increase in sales team including interns and they wish to make the lead conversion more aggressive so they should be considering lowering the threshold which would increase the sensitivity i.e the model will predict almost all the conversions correctly (also there will be chances of predicting the non-conversions as conversions) thus increasing the count of conversions. This will allow the team to make phone calls to as much of such people as possible.

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.**

   For this also the similar approach can be followed, we can increase the threshold probability such that the Specificity will be increased i.e the model will correctly predict all the non-conversions however there will also be chance of losing actual conversions as it might miss-classify some actual conversion to non-conversion thus losing the lead.

   This will also ensure that the leads who are at the close proximity of the probability of being converted or not are not selected and this allow the sales team to not make unnecessary calls. Since here they are not looking to make the lead conversion more aggressive and only make the phone calls unless it's extremely necessary as they have reached its target for a quarter before the deadline so even if we increase the threshold

probability thus increasing the **Specificity** it won’t impact much and the team can focus on some new work as well.