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

A. The top three variables in your model which contribute most towards the probability of a lead getting converted:

    a. **Lead Origin**
    b. **What is your current occupation**
    c. **Last activity**

|	coef	std err	z	P>|z|	[0.025	0.975]
const	-0.9593	0.054	-17.710	0.000	-1.065	-0.853
Total Time Spent on Website	0.9521	0.035	27.585	0.000	0.884	1.020
What is your current occupation_Working Professional	2.8253	0.186	15.219	0.000	2.461	3.189
Lead Origin_Lead Add Form	3.0492	0.184	16.556	0.000	2.688	3.410
Lead Source_Direct Traffic	-0.6216	0.080	-7.813	0.000	-0.778	-0.466
Lead Source_Organic Search	-0.3950	0.103	-3.842	0.000	-0.596	-0.193
Lead Source_Welingak Website	1.9236	0.746	2.580	0.010	0.462	3.385
Last Activity_Converted to Lead	-1.2893	0.214	-6.035	0.000	-1.708	-0.871
Last Activity_Email Bounced	-1.8632	0.288	-6.472	0.000	-2.427	-1.299
Last Activity_Had a Phone Conversation	1.9195	0.644	2.979	0.003	0.656	3.183
Last Activity_Olark Chat Conversation	-1.0928	0.160	-6.845	0.000	-1.406	-0.780
Last Activity_SMS Sent	1.1409	0.072	15.881	0.000	1.000	1.282

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?**

A. The top 3 categorical/dummy variables in the model which should be focused the most on to increase the probability of lead conversion are:
    a. **Lead Origin_Lead Add Form –** The leads who added the form
    b. **What is your current occupation_Working Professional –** The working professionals are having more chances for taking up the courses
    c. **Last Activity_SMS Sent –** The leads who were sent messages are having more chances
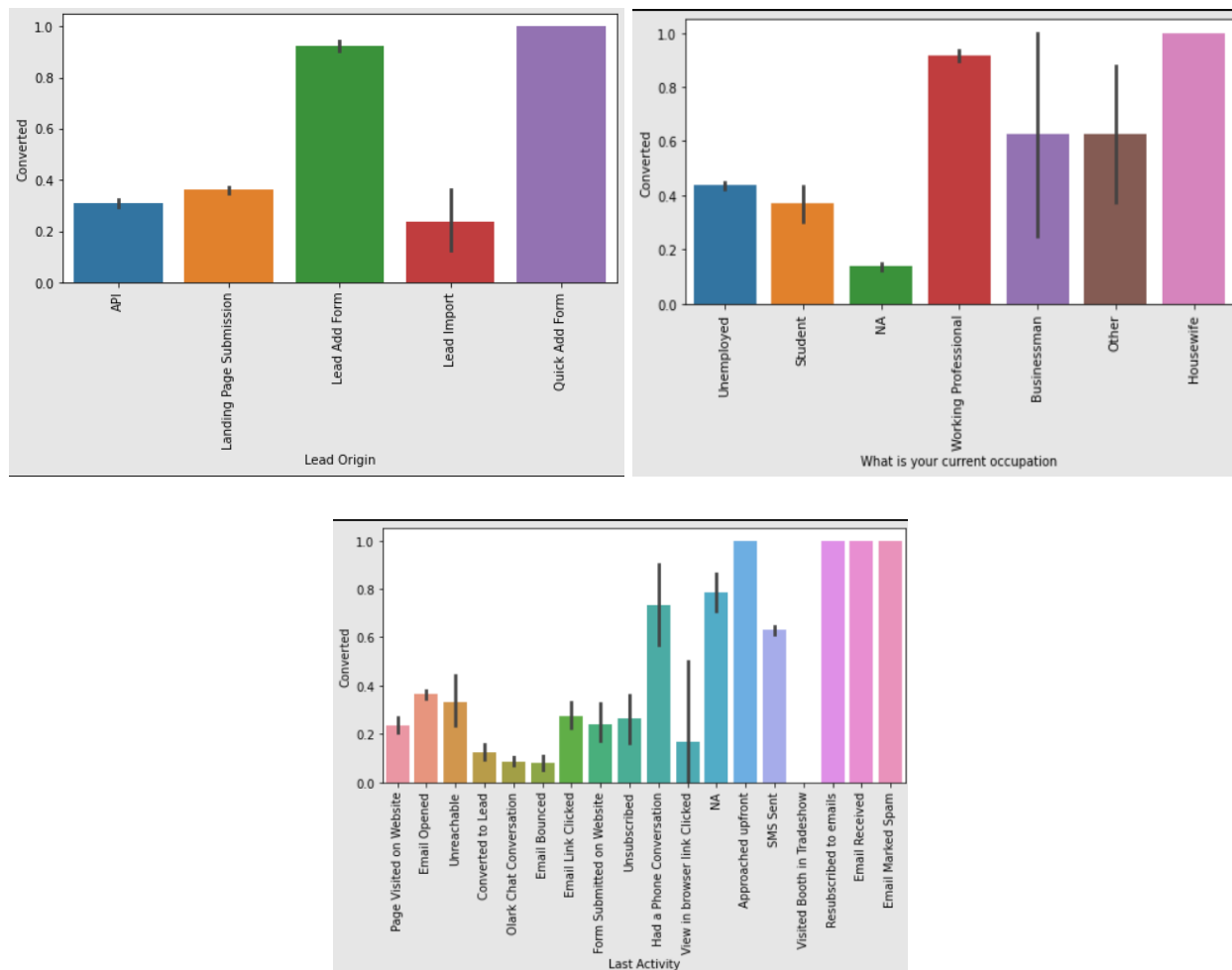
3. **X Education has a period of 2 months every year during which they hire some interns. The sales team, in particular, has around 10 interns allotted to them. So during this phase, they wish to make the lead conversion more aggressive. So they want almost all of the potential leads (i.e. the customers 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.**

A. Our model 5 (final) is having high sensitivity which implies that our model 5 will correctly identify (almost) all the leads who are likely to be converted
From below graph we can see that for different threshold values there's different model evaluation metrics (Sensitivity, Specificity, Precision and Accuracy). It might even misclassify some non-conversion cases as conversions.

Accuracy, Sensitivity & Specificity Curve
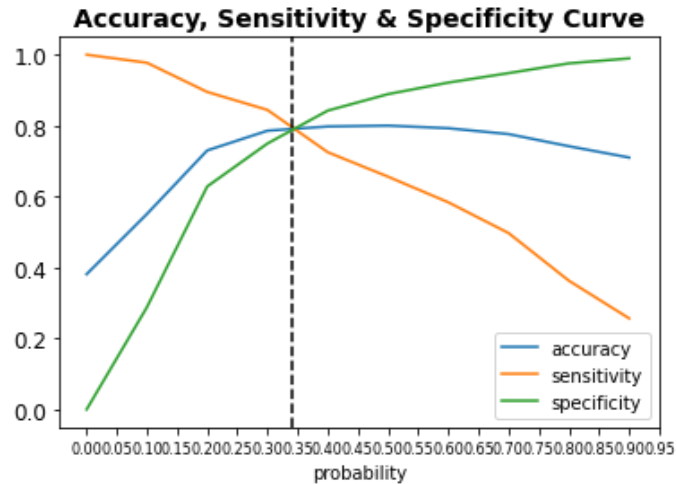
Given that the X Education has a time duration of 2 months & 10 interns around, they have quite some time to call all the potential customers and convince them to take up the course i.e. converted =1.

They can choose a lower threshold value for Conversion Probability which will make sure that the sensitivity rating is high and hence who are likely to Convert are identified correctly with our model.

This can be done by Agents:

     a. Calling the potential customers
     b. asking their reasons of interest in the course
     c. taking background and understanding their goals

With the help of our model, they can take up the contributing attributes and make strong points in correspondence with the goals and aims of the customer.

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.**

A. Since the time is less, it's necessary for the company to focus on the Specificity Metric. They can choose a lower threshold value for Conversion Probability which will make the specificity metric very high. Therefore, our model will correctly identify almost all leads who are not likely to convert and hence it will misclassify some Conversion cases as non-Conversions.

As X Education has already reached its target for a quarter and doesn't want to make phone calls unless it is extremely necessary means they want to minimize the rate of useless phone calls to the customers. And above method will help them to focus on new work. In this way the efficiency of sales team would increase as the conversion rate would be high.