

Assignment Subjective Questions and Responses

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

The top 3 variables in the model contributing most towards the probability of a lead getting converted can be identified from the model summary at step 117.

Within numeric variables used by the model:

1. Total Time spent on Website with RFE Rank 1 is a strong factor in conversion as also evidenced by the EDA at step 69. It has a coefficient of 1.0264 thereby making it a 1x factor contribution towards probability of converting a prospect into a customer.

However, going purely by coefficient values, P value and RFE ranking variables influencing the model positively:

2. Tag closed by Horizzon : This variable has a 0.000 P value and RFE rank 1 showing that it is extremely significant to the target variable conversion, plus it has the highest coefficient of 7.2111 indicating that a prospect where it is worked on by Horizzon has a 7x contribution factor of getting converted into a customer.
3. Tag Lost to EINS : This variable is also at a 0.000 P value and RFE rank 1 is highly significant to the target variable conversion. At second highest coefficient value of 6.3128, it also holds a 6x contribution factor of a prospect getting converted to customer.

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?

In addition to the above two categorical dummy variables:

1. Tag will revert after reading email: This variable is also at a 0.000 P value, RFE rank 1 and hence is highly significant to the target variable conversion. At third highest coefficient value of 4.9946, it also holds a 5x factor contribution of a prospect getting converted to customer.
2. Lead Source Welingak Website: Again, at a 0.000 P value, RFE rank 1 with high significance. This variable holds a coefficient value of 4.5851 which is again a 4.5 times the contribution towards probability of a prospect getting converted to a customer if the Lead Source is from Welingak Website.
3. Last Activity SMS Sent: As also evidenced by the EDA insights at step 42, this variable also has a P value of 0.000 and RFE rank of 1 plus a positive coefficient of 2.1107 – which is again a 2x times the contribution towards probability of prospect getting converted to customer.

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.

Although the model does not include certain variables like Working professional, Management Specializations etc – however when the lead conversion needs to be more aggressive, these variables identified through EDA should be also focused on, in addition to the top variables identified above.

- Occupation working professional: EDA insights step 56
- City: Thane and outskirts: EDA insights: step 66
- Specialization Management Specializations: EDA insights: step 51

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.

From EDA insights step 61, we can see that there's a lot of data where the number is either ringing, or invalid, or number not provided, or call hang up or wrong number given. Instead through EDA it is clear that SMS sent and conversion through emails is much higher.

EDA insights step 62 shows ringing has very low conversion rate. Instead of phone calls, the company should focus on sending more SMSs push notifications and market more through emails.