

LEAD SCORE CASE STUDY – SUMMARY

Goal of Case Study Build a logistic regression model to assign a lead score between 0 and 100 to each of the leads which can be used by the company to target potential leads. A higher score would mean that the lead is hot, i.e., is most likely to convert whereas a lower score would mean that the lead is cold and will mostly not get converted.

Results:

After running through 3 models on the Test Data these are the figures we obtain:

Accuracy: 92.15%

Sensitivity: 91.98%

Specificity: 91.99%

Final Observation:

Let us compare the values obtained for Train & Test: Train Data:

Accuracy: 92.15%

Sensitivity: 91.98%

Specificity: 91.99%

Test Data:

Accuracy: 92.78%

Sensitivity: 91.98%

Specificity: 93.26%

Model 3 seems to predict the Conversion Rate very well and we should be able to give confidence in making good calls based on this model.

MODEL 3

Generalized Linear Model Regression Results

Dep. Variable:	Converted	No. Observations:	4648
Model:	GLM	Df Residuals:	4633
Model Family:	Binomial	Df Model:	14
Link Function:	logit	Scale:	1.0000
Method:	IRLS	Log-Likelihood:	-952.57
Date:	Tue, 18 Oct 2022	Deviance:	1905.1
Time:	12:40:56	Pearson chi2:	5.85e+03
No. Iterations:	24		
Covariance Type:	nonrobust		

	coef	std err	z	P> z	[0.025	0.975]
const	-0.7750	0.081	-9.597	0.000	-0.933	-0.617
Total Time Spent on Website	1.1777	0.062	18.853	0.000	1.055	1.300
Lead Origin_Lead Add Form	23.5811	3.99e+04	0.001	1.000	-7.81e+04	7.82e+04
What is your current occupation_Working Professional	1.2813	0.473	2.708	0.007	0.354	2.209
Last Activity_Converted to Lead	-0.9333	0.357	-2.615	0.009	-1.633	-0.234
Last Activity_Email Bounced	-1.9201	0.543	-3.537	0.000	-2.984	-0.856
Last Activity_Page Visited on Website	-1.2996	0.274	-4.737	0.000	-1.837	-0.762
Last Notable Activity_Modified	-1.1671	0.152	-7.680	0.000	-1.465	-0.869
Tags_Busy	1.3109	0.230	5.692	0.000	0.859	1.762
Tags_Closed by Horizzon	26.8253	1.78e+04	0.002	0.999	-3.48e+04	3.48e+04
Tags_Interested in other courses	-2.3549	0.417	-5.646	0.000	-3.172	-1.537
Tags_Lost to EINS	5.0071	0.627	7.986	0.000	3.778	6.236
Tags_Other_Tags	-2.3535	0.232	-10.141	0.000	-2.808	-1.899
Tags_Ringing	-3.0233	0.270	-11.209	0.000	-3.552	-2.495
Tags_Will revert after reading the email	4.6353	0.231	20.055	0.000	4.182	5.088