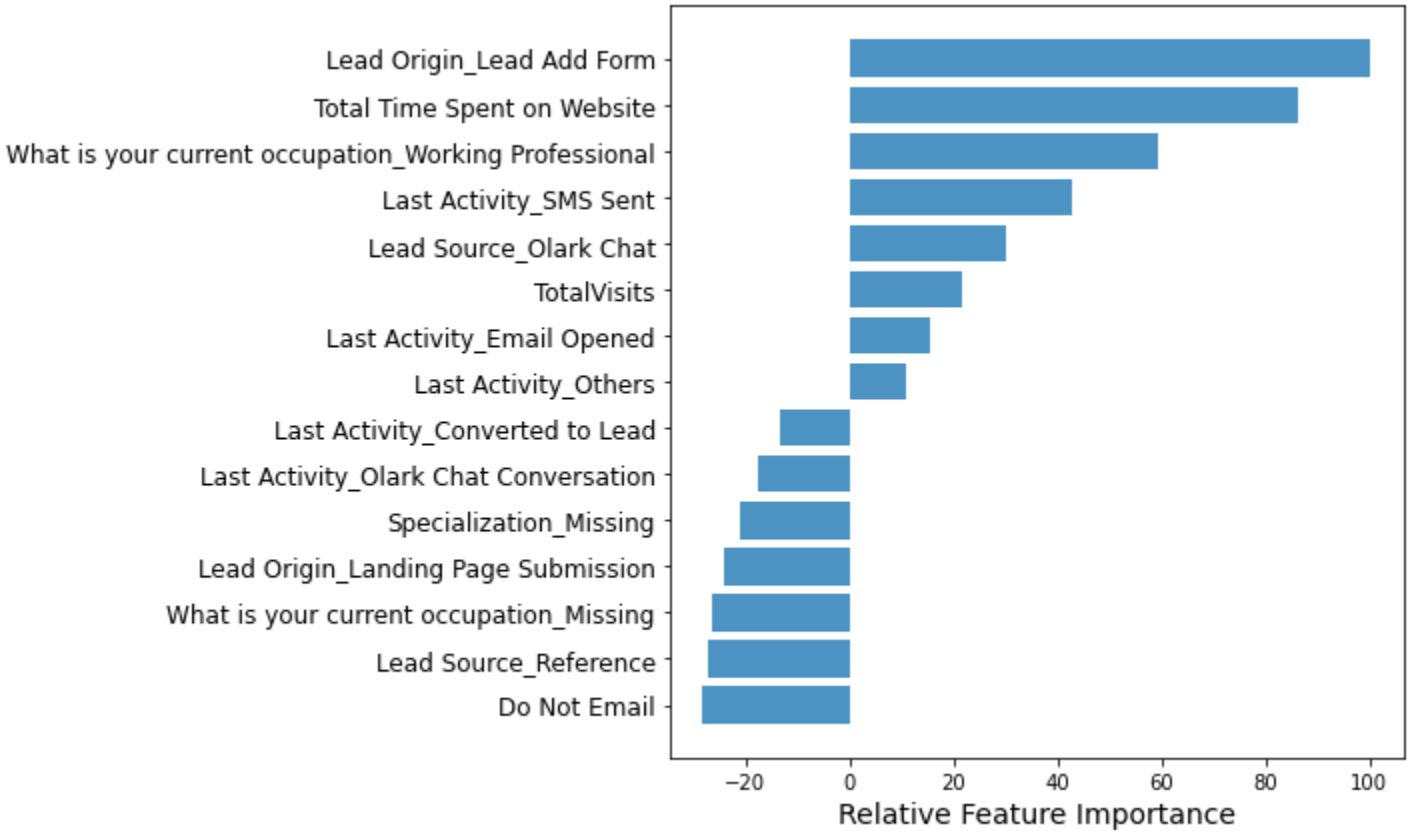
Logistic Regression Model on X Education

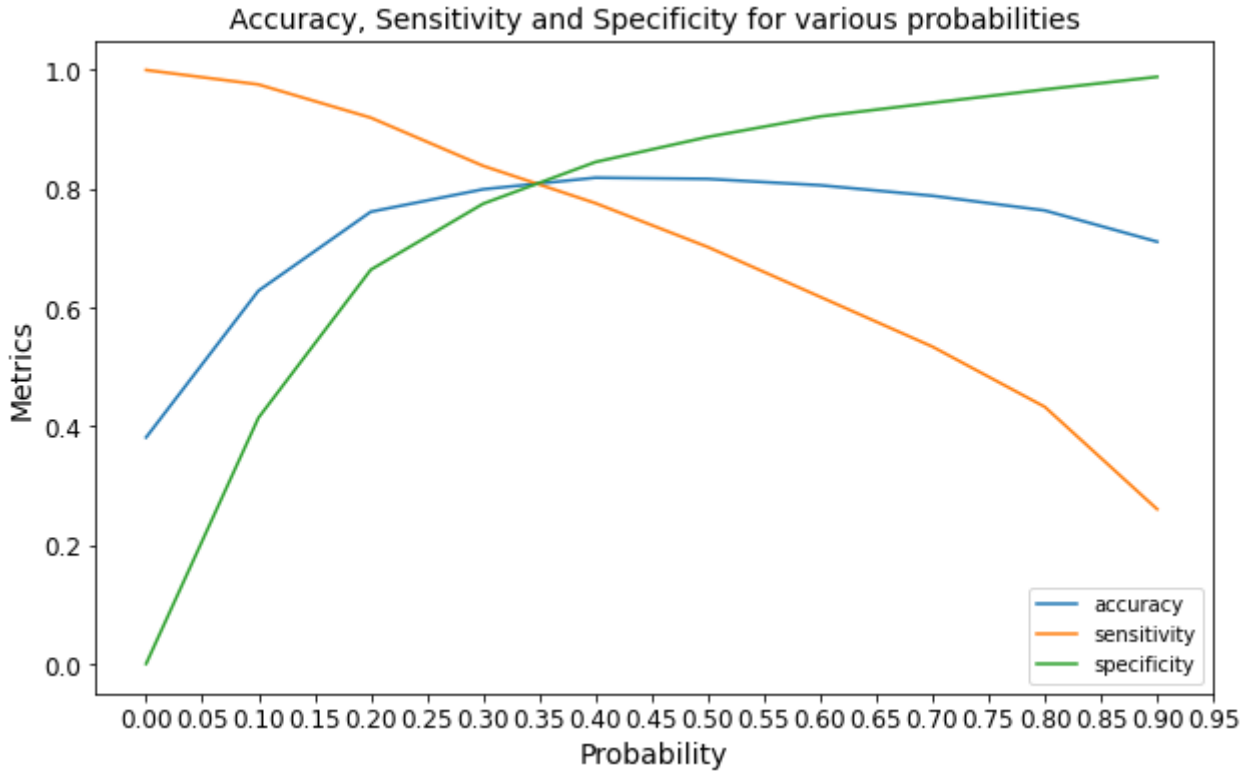
Objective of Business

- To identify features and develop model which accurately predicts conversion of Leads and assign Lead Score.
- Interpreting which features contribute most towards Lead Conversion.

Features obtained from model and their Importance.



Optimal Cutoff Probability



Evaluation Metrics (Train Data)

- The Confusion Matrix is
- [[3226 776]
- [475 1991]]
- The Accuracy is   : 0.81 (0.806586270871985 2)
- The Sensitivity is : 0.81 (0.807380373073803 7)
- The Specificity is : 0.81 (0.806096951524237 9)
- The Precision is   : 0.72 (0.719551861221539 6)
- The Recall is   : 0.81 (0.806096951524237 9)
- The f1 score is   : 0.76 (0.760369695762908 2)
- The False Positive Rate is   : 0.19 (0.193930484757621 2)
- The Positive Predictive Value is : 0.72 (0.719551861221539 6)
- The Negative Predictive Value is : 0.87 (0.871656309105647 2)

Evaluation Metrics (Test Data)

- The Confusion Matrix is
- [[1373 304]
- [228 867]]
- The Accuracy is   : 0.81 (0.808080808080808)
- The Sensitivity is : 0.79 (0.791780821917808)2
- The Specificity is : 0.82 (0.818723911747167)5
- The Precision is   : 0.74 (0.740392826643894)
- The Recall is   : 0.82 (0.818723911747167)5
- The f1 score is   : 0.78 (0.777590665705993)4
- The False Positive Rate is   : 0.18 (0.181276088252832)45
- The Positive Predictive Value is : 0.74 (0.740392826643894)
- The Negative Predictive Value is : 0.86 (0.857589006870705)8

Conclusions.

- The Model shows good agreement between Train and Test data.
- The Features and their importance tell the client where to focus to obtain more conversions of Leads.