



Lead Score Case Study

Presented by
Suneel Putta
Hemamanjari Prakash



Agenda

Problem Statement

Business Goal

Implementation Strategies

Model Building(Training)
Model Building(Test)

Conclusion

Problem Statement

X Education is an organization which provides online courses for industry professionals. The company marks its courses on several popular websites like google, etc.

The company wants to select most promising leads that can be converted to paying customers.

Although the company generates a lot of leads only a few are converted into paying customers, wherein the company wants a higher lead conversion.

The company has 30% conversion rate through the process of turning leads into customers by approaching those leads which are to be found having interest in taking the course. The implementation process of lead generating attributes are not efficient in helping the conversions,



The background features a composition of organic, flowing shapes in muted colors: a large olive green shape on the right, a light grey shape in the center, and a dark brown shape on the left. A stylized pine branch is visible in the upper left corner. Two thin, white, wavy lines curve across the bottom of the image.

Business Goal

Business Goal

The company requires a model to be built for selecting the most promising leads.

Each lead needs to be given a lead score in order to indicate how promising and impactful the lead is. Higher the lead score indicates greater the chances of the lead conversion and lower the lead score indicates lesser the chances for the lead conversion.

The model has to be built with the lead conversion rate around 80% or more.



STRATEGY IMPLEMENTATION

- Reading and Data Interpretation
- Cleaning and Preparation of Data
 - Exploratory Data Analysis
 - Scaling features
- Prepare the data for model building
 - Build a Logistic regression Model
 - Assign a lead score for each leads
 - Testing the data on train set
- Evaluate the model by different measures and metrics
 - Test the model on test data
- Measure the accuracy of the model and other metrics for evaluation

EDA – Exploratory Data Analysis

- ❖ Lead Origin Vs Converted Graph : Maximum conversion happened from Landing Page Submission.
 - ❖ Lead Source Vs Converted : Major conversion in the lead source is from Google.
 - ❖ Do Not Email Vs Converted: Major conversion happened from emails that have been sent
 - ❖ Do Not Call Vs Converted : Major conversion happened from when calls were made
 - ❖ Current Occupation Vs Converted : More conversion happened with people who were unemployed. Also out of the 7 businessmen , 4 got converted and out of 10 housewives , all 10 leads got converted
 - ❖ Search Vs Converted : Conversion rate is high on leads who are not through search
- These are the above observations from the graph's inn EDA.

Model Building

- ❖ Splitting data into train and test data
- ❖ Scale the variables in train set
- ❖ Build the first model
- ❖ Use RFE to eliminate less relevant variables
- ❖ Build the next model
- ❖ Eliminate variables based on high p-values
- ❖ Check VIF value for all the existing columns
- ❖ Predict using train set
- ❖ Evaluate accuracy and other metrics
- ❖ Predict using test set
- ❖ Precision and recall Analysis on test predictions



Model Evaluation(Test)

- Accuracy : 81%
- Sensitivity : 79%
- Specificity : 82%
- Precision : 79%
- Recall : 71%



Model Evaluation(Train)

- Accuracy : 81%
- Sensitivity : 71%
- Specificity : 88%
- Cut-Off Probability : 0.37



Conclusion

Logistic Regression Model:

- ❖ The model shows high close to 81% accuracy.
- ❖ The threshold has been selected from Accuracy, Sensitivity, Specificity.
- ❖ The model shows 79% sensitivity and 82% specificity
- ❖ The model finds correct promising leads and leads that have less chances of getting converted.
- ❖ Overall, this model seems to be good.



The background features a light beige base with large, soft-edged shapes in muted olive green and terracotta red. In the upper left, there are faint, grey line-art sketches of leaves or branches.

Thank you

suneelputta@gmail.com

hemamanjari.prakash@gmail.com