# **Lead Score Case Study**

Submitted By:
Deepak Reddy
Deepak K
Deepthi V

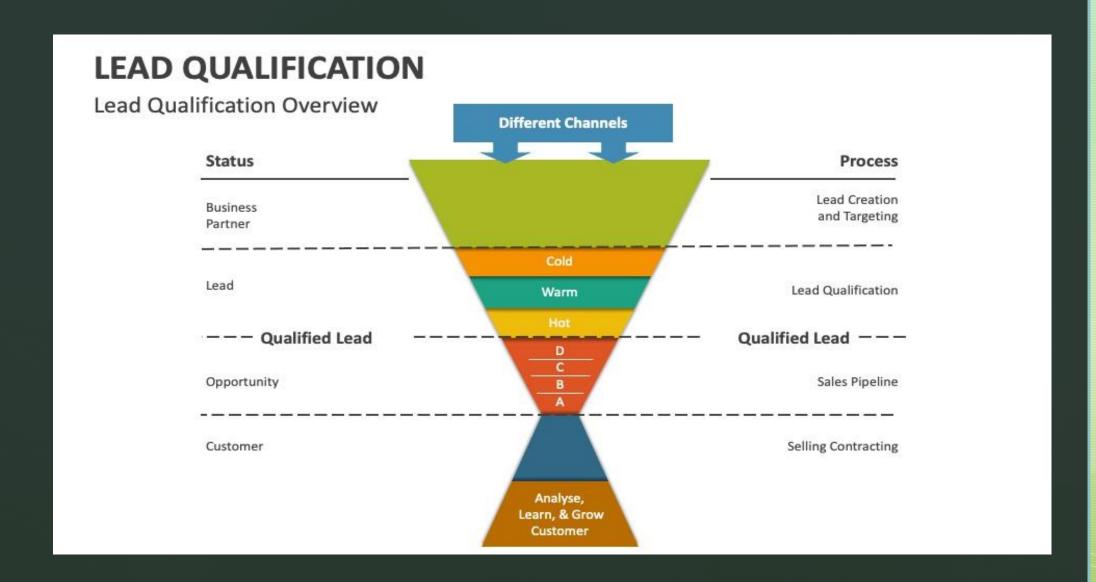
## **Problem Statement and Business Goals**

- Problem Statement: X Education sells online courses to industry professionals. The company markets its courses on several websites and search engines like Google. Once these people land on the website, they might browse the courses or fill up a form for the course or watch some videos. When these people fill up a form providing their email address or phone number, they are classified to be a lead. Moreover, the company also gets leads through past referrals. Once these leads are acquired, employees from the sales team start making calls, writing emails, etc. Through this process, some of the leads get converted while most do not. The typical lead conversion rate at X education is around 30%.
- Business Goal: X Education needs help in selecting the most promising leads, i.e. the leads that are most likely to convert into paying customers. The company needs a model wherein you a lead score is assigned to each of the leads such that the customers with higher lead score have a higher conversion chance and the customers with lower lead score have a lower conversion chance. The CEO, in particular, has given a ballpark of the target lead conversion rate to be around 80%.

## **Strategy Used**

- Source the data for analysis
- Clean and prepare the data
- Exploratory Data Analysis.
- Feature Scaling
- Splitting the data into Test and Train dataset.
- Building a logistic Regression model and calculate Lead Score.
- Evaluating the model by using different metrics Specificity and Sensitivity or Precision and Recall.
- Applying the best model in Test data based on the Sensitivity and Specificity Metrics

## **Lead Qualification Overview**



## 3 Pillars of Lead Scoring

#### **LEAD SCORING**

3 Pillars of Lead Scoring

#### Contact Information

The demographic information helps us understand the quality of engagement of a prospect as they enter your database.

- Country/Region
- Persona Type
- Job Role/Seniority
- Sector/Vertical
- Interests
- Phone number known
- · Email address known

### Interactions & Behaviours

Behavioral Information HubSpot gathers over time.

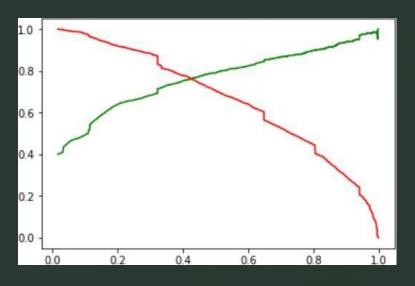
- Number of website visits
- Return visits
- Visited a key page (eg. pricing)
- Blog views
- Emails opened
- · Emails clicked
- Social interaction
- . Type of form filled out

#### Negatives

Bad fit qualities that help us filter out time-wasters/nonprioritized contacts

- Unsubscribed from email
- Visited careers Page multiple times
- Competitor email domain used
- Unengaged with email
- Has not revisited the site in 6 months
- · Bad fit persona
- · Bad fit Sector

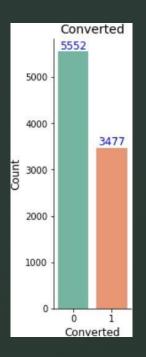
### **Model Evaluation- Precision and Recall on Train Dataset**



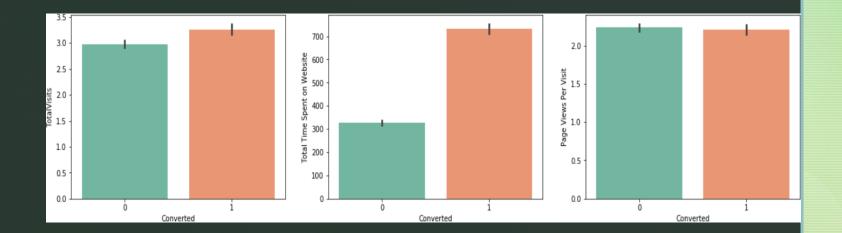
The graph depicts an optimal cut off of 0.37 based on Accuracy, Sensitivity and Specificity • Accuracy - 81% • Sensitivity - 80 % • Specificity - 82 % • False Positive Rate - 18 % • Positive Predictive Value - 74 % • Positive Predictive V

# **Exploratory Data Analysis**

We have around 39% Conversion rate in Total

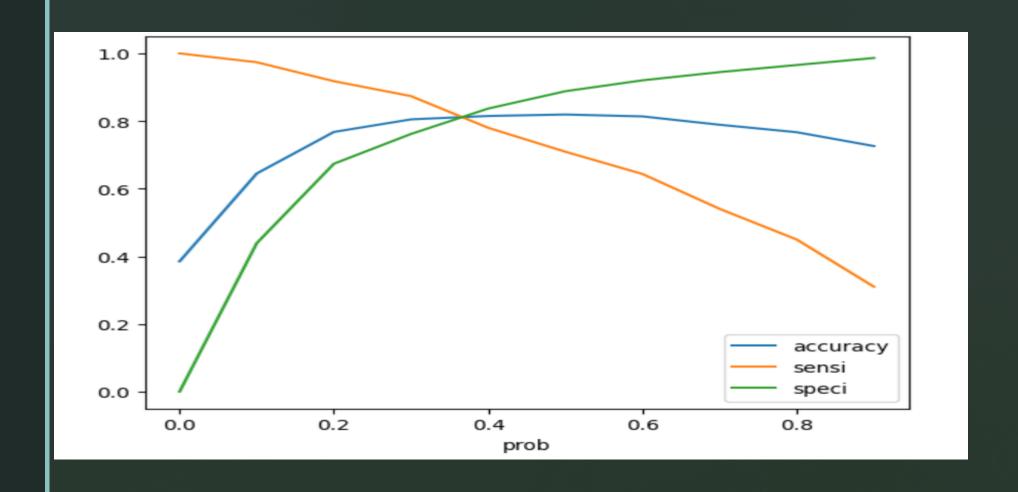


The conversion rates were high for Total Visits, Total Time Spent on Website and Page Views Per Visit



## Model Evaluation - Sensitivity and Specificity on Train Data Set

• The graph depicts an optimal cut off of 0.35 based on Accuracy, Sensitivity and Specificity



## Conclusion

- > While we have checked both Sensitivity-Specificity as well as Precision and Recall Metrics, we have considered the optimal cut off based on Sensitivity and Specificity for calculating the final prediction.
- > Sensitivity and Specificity values of test set are around 80% and 81% which are approximately closer to the respective values
- > Also the lead score calculated shows the conversion rate on the final predicted model is around 80% (in train set) and 81% in test set
- > The top 3 variables that contribute for lead getting converted in the model are
  - > Lead Score\_Welingak Website
  - ➤ Lead Score\_referaence
  - > Last activity\_Had a Phone Conversation

Hence overall this model seems to be good.