

# *Lead Scoring Case Study*

## **CONTRIBUTORS:**

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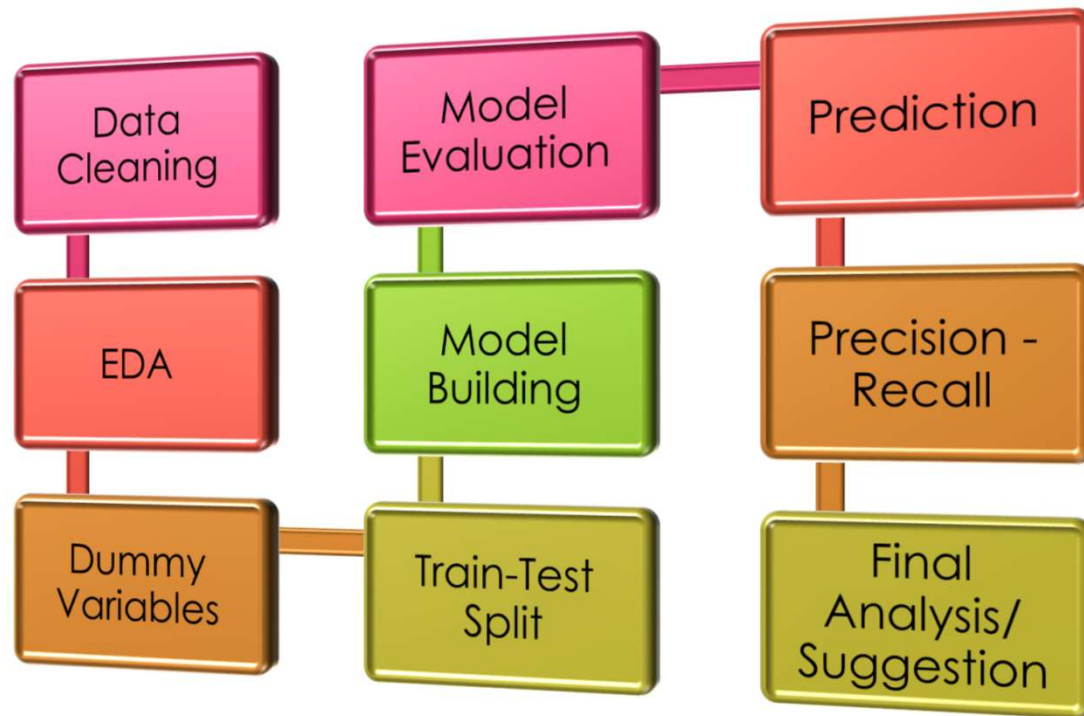
# ***Problem Statement***

- An education company named X Education sells online courses to industry professionals. On any given day, many professionals who are interested in the courses land on their website and browse for courses.
- 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***

- To make this process more efficient, the company wishes to identify the most potential leads, also known as 'Hot Leads'. If they successfully identify this set of leads, the lead conversion rate should go up as the sales team will now be focusing more on communicating with the potential leads rather than making calls to everyone

# ***Problem Solving Strategy/ Methodology***



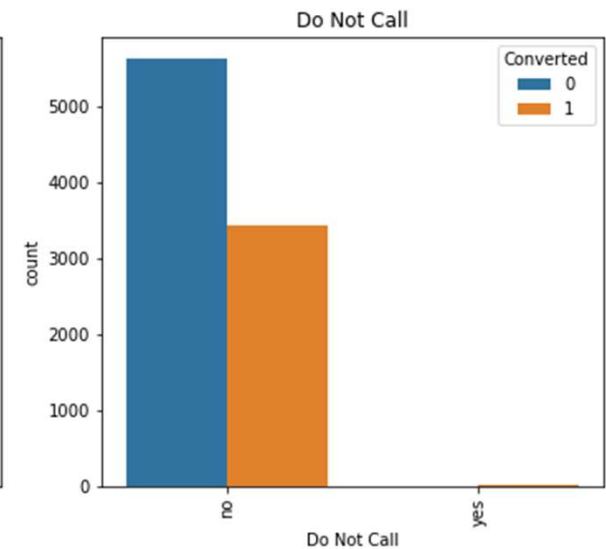
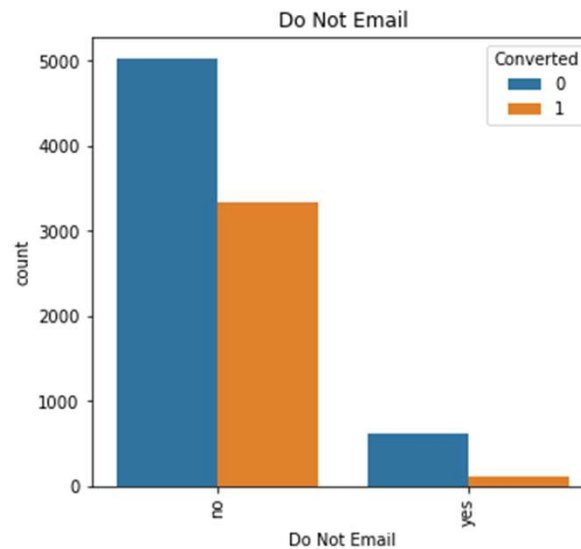
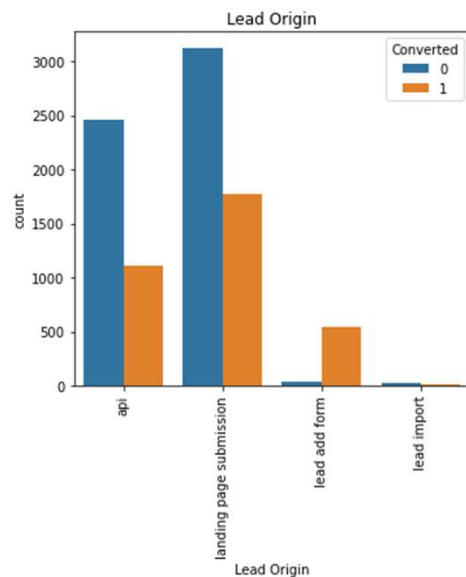
# ***Data Cleaning***

- We removed the redundant columns by using nunique function
- Removed columns with >30% null values where it doesn't impact the analysis
- Columns that were essential were retained if though the null values were >30% and replaced the null values to 'Not provided'.

# *Exploratory Data Analysis (EDA)*

## *(1/3)*

1. In Lead Origin, maximum conversion happened from Landing page submission
2. It was also noticed that emails sent and calls made had a major conversion

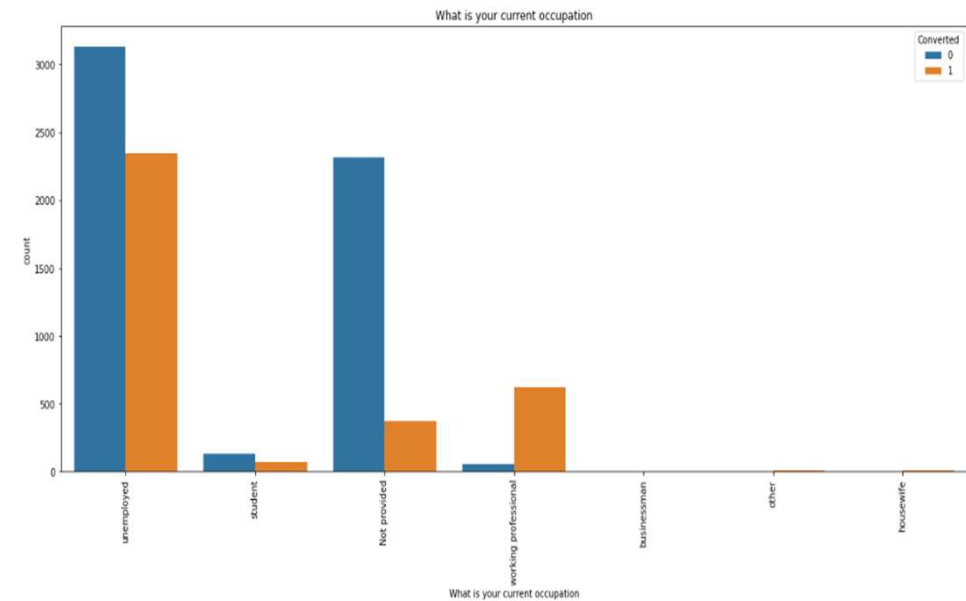
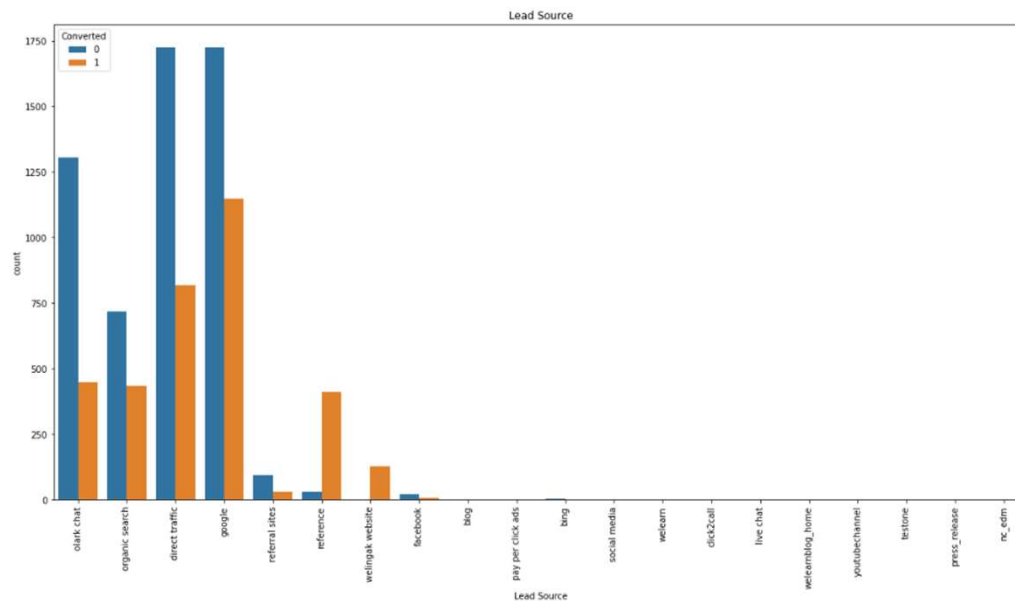


# *Exploratory Data Analysis (EDA)*

## *(2/3)*

3. Lead source from google, Direct traffic and Olark chat showed higher conversion rates compared other sources

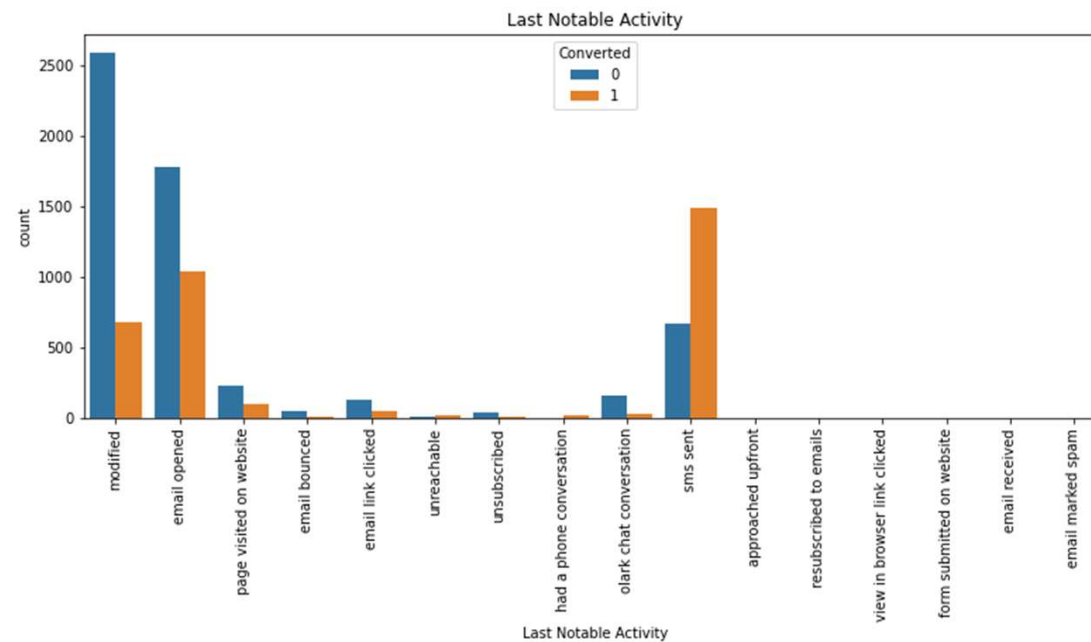
4. More conversion were noticed with the current occupation type 'Unemployed'



# ***Exploratory Data Analysis (EDA)***

## ***(3/3)***

5. We noticed higher conversion when Last Notable Activity value was 'SMS sent'



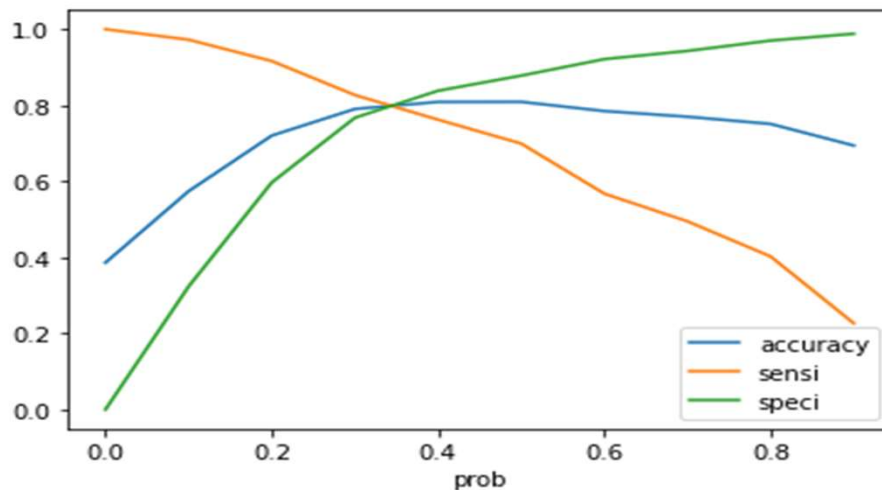


# ***Dummy variables/ Top 15 Variables impacting the Analysis***

- Total Time Spent on Website
- Total Visits
- Lead Source\_google
- Lead Source\_direct traffic
- Lead Source\_organic search
- Last Activity\_sms sent
- Lead Origin\_lead add form
- Lead Source\_welingak website
- Do Not Email\_yes
- What is your current occupation\_working professional
- Last Notable Activity\_unsubscribed
- Lead Source\_referral sites
- Last Activity\_olark chat conversation
- What is your current occupation\_housewife
- Last Notable Activity\_had a phone conversation

# ***Model Evaluation (Accuracy, Sensitivity and Specificity)***

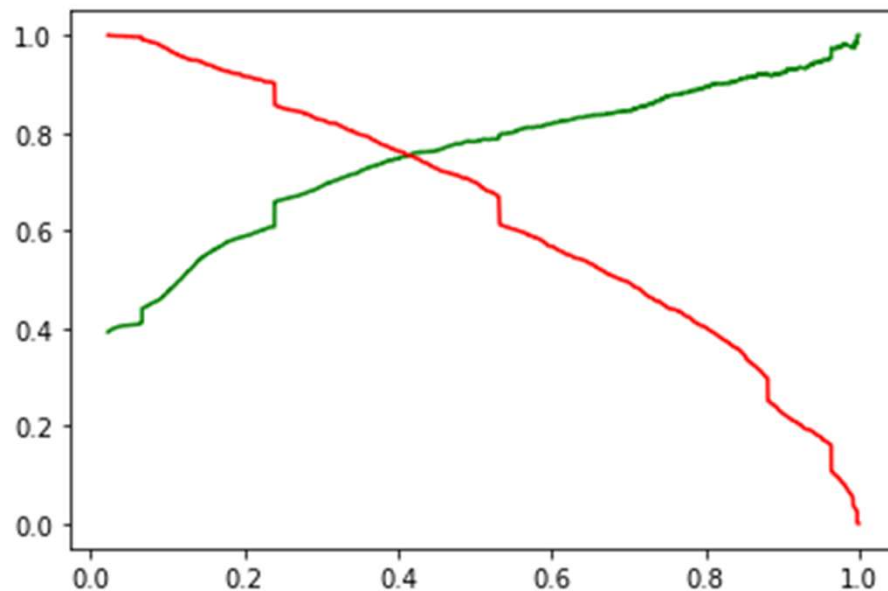
- The Graph depicts an optimal cut off of 0.38 based on accuracy, sensitivity and specificity



Accuracy – 80%  
Sensitivity – 76%  
Specificity – 83%

# ***Model Evaluation (Precision & Recall)***

- The Graph depicts an optimal cut off of 0.41 based on precision and recall



Precision – 78%  
Recall – 69%

# ***Final Analysis***

**The following variables mattered the most in the potential buyers/ Conversions:**

1. The total time spent on the website
2. Total number of visits
3. Lead source:
  - a. Google
  - b. Direct traffic
  - c. Olark chat
  - d. Organic search
4. Last activity:
  - a. Olark Chat
  - b. SMS
5. Lead origin is Lead add Format
6. The current Occupation is Working Professional

## ***Suggestion***

- ❖ The sales team should focus more on the profiles matching the criteria stated in the analysis to have maximum conversions and flourish the sales chart.
- ❖ Make the website more interactive so that the potential buyers who spend more time on website have higher chance of buying the courses
- ❖ Make the Olark chat process and SMS more engaging to have a higher conversion rate



***Thank You!***