

▶ LEAD SCORING CASE STUDY




PROBLEM STATEMENT

- X Education in the Ed-Tech Industry sells online courses to industry professionals.
- It's lead conversion is very poor.
- The company wants to assign Lead Score to each lead using Machine Learning Model.

Assumptions

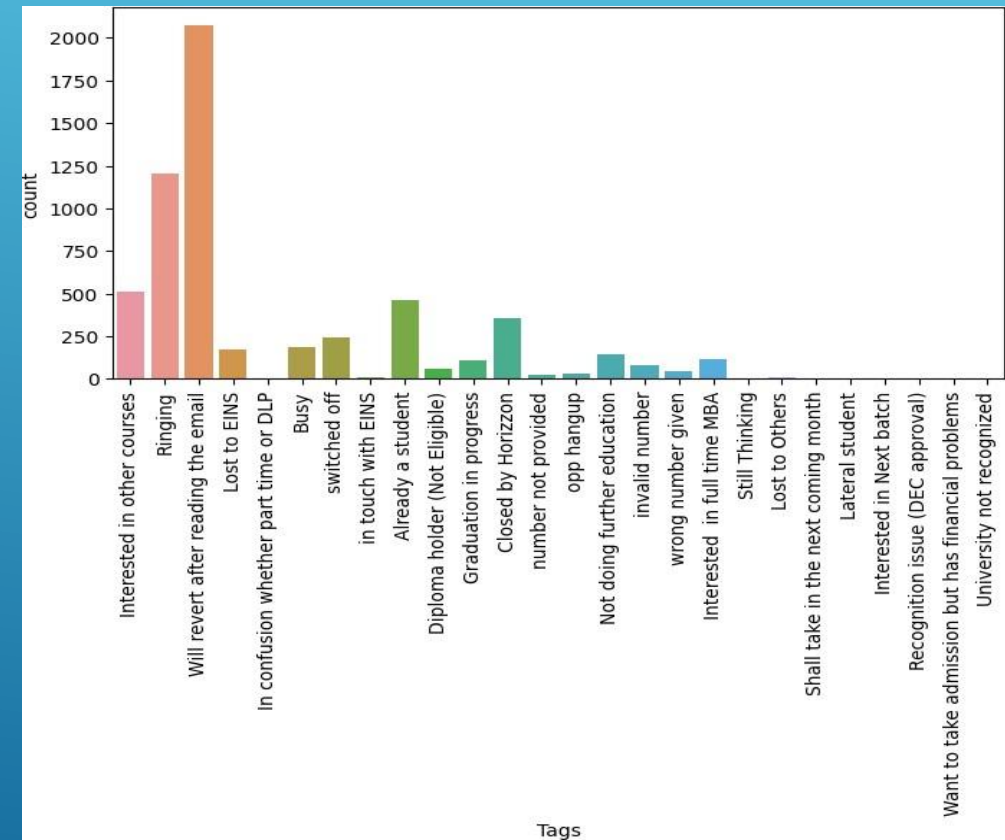
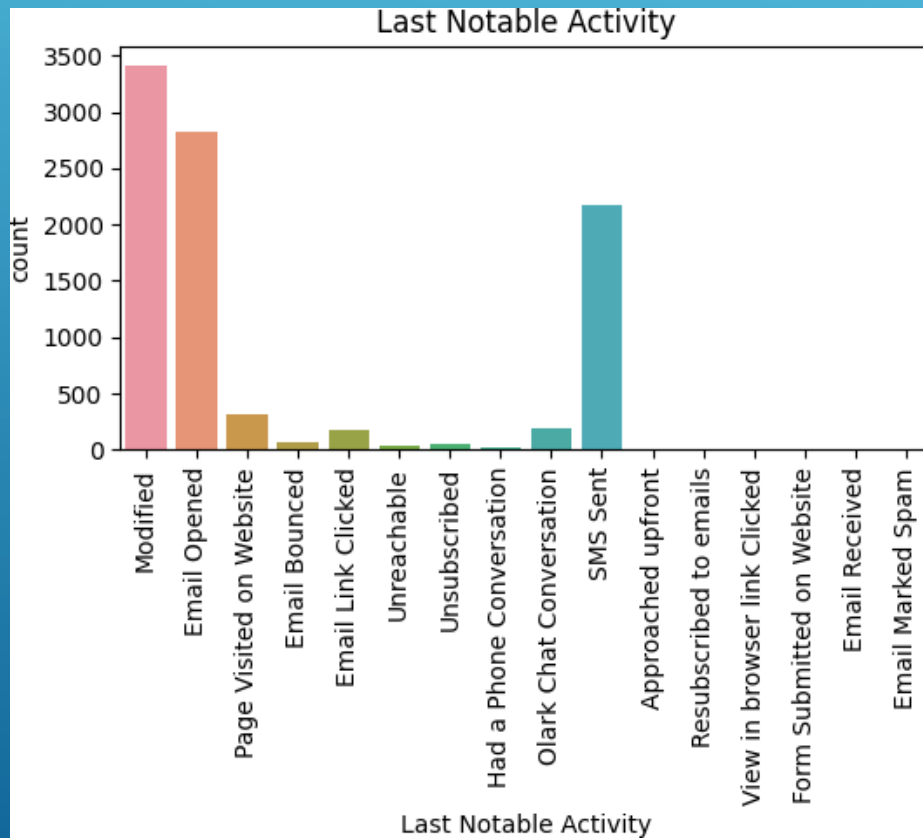
- Unique value variables like 'Prospect ID' and Single value variables are dropped as they do not provide any significant information.
- Variables with high missing values and data imbalances are also not considered.

APPROACH FOLLOWED

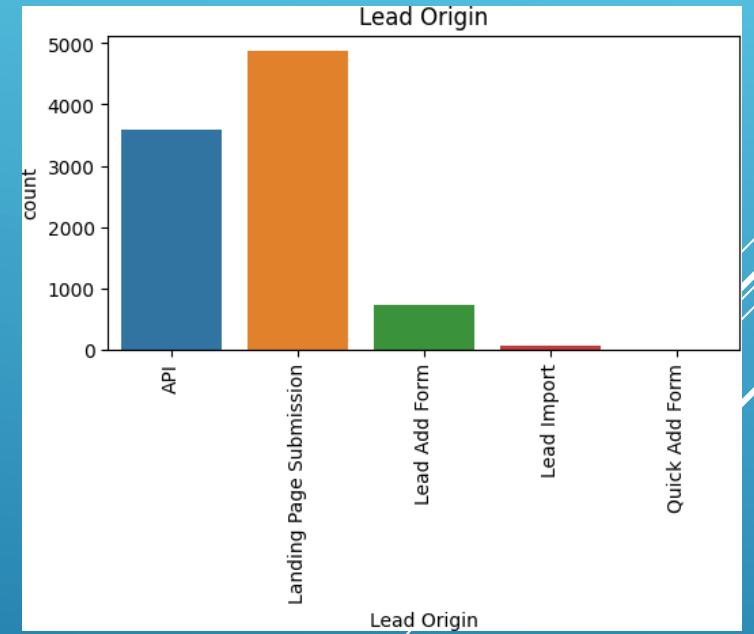
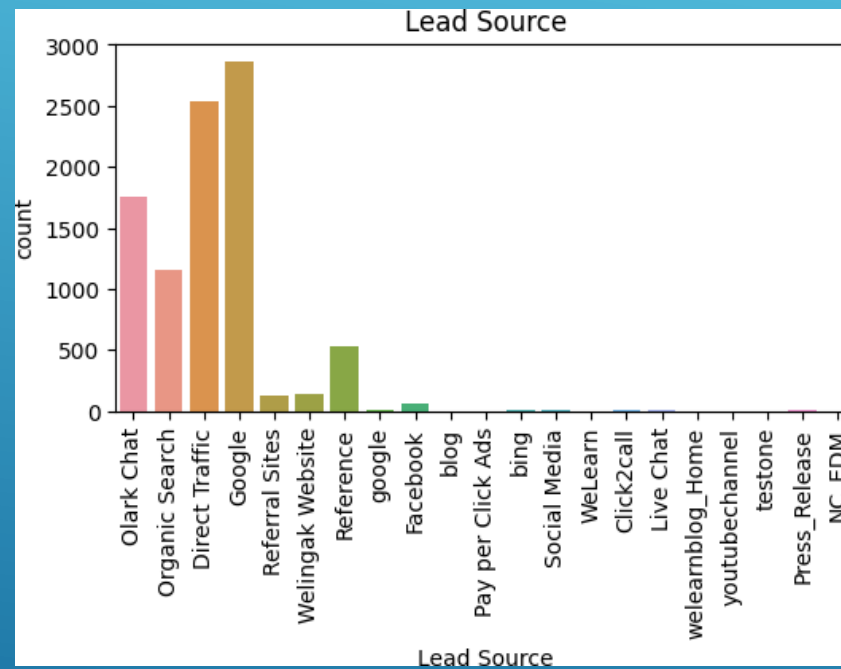
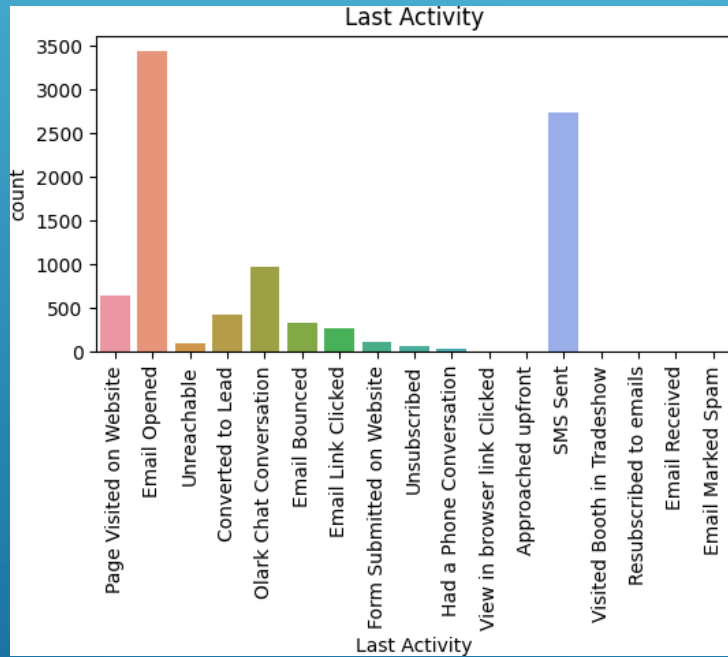
1. Data Cleaning and Data Manipulation
 2. Exploratory Data Analysis
 3. Data Pre-processing
 4. Model Building
 - Logistic Regression Model
 5. Model Evaluation
 6. Predictions
 7. Conclusions and Recommendations
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- Several white lines of varying lengths and slopes are positioned in the bottom right corner of the slide, creating a modern, abstract graphic element.

Notable EDA Conclusions

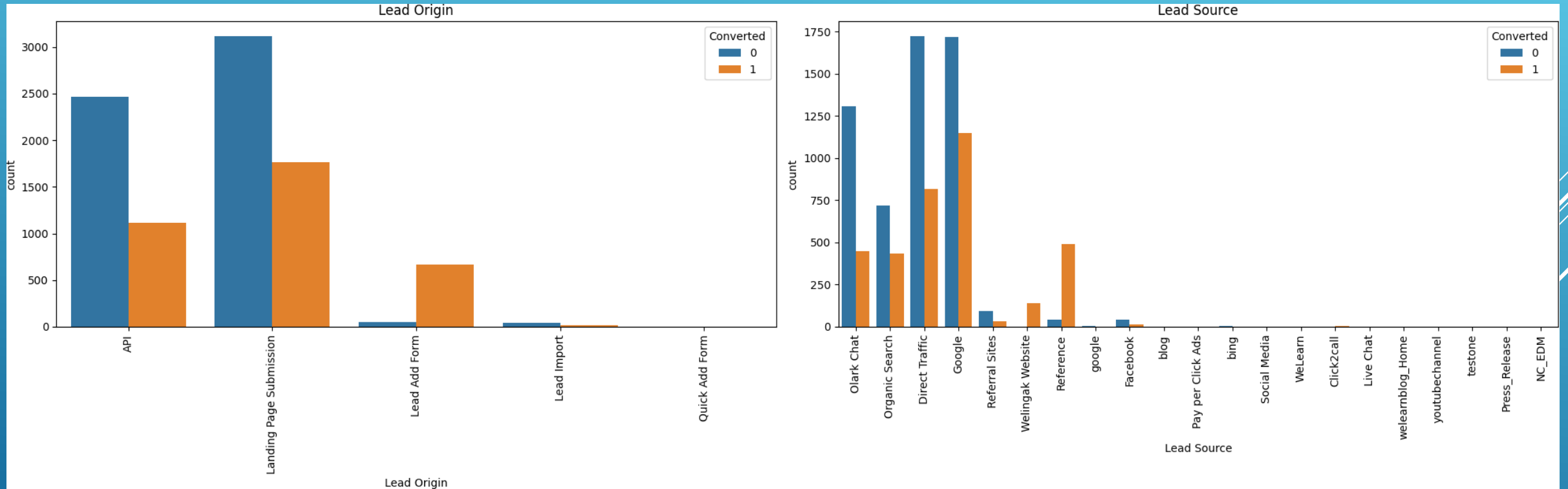
The following variables seem to give significant information about the dataset



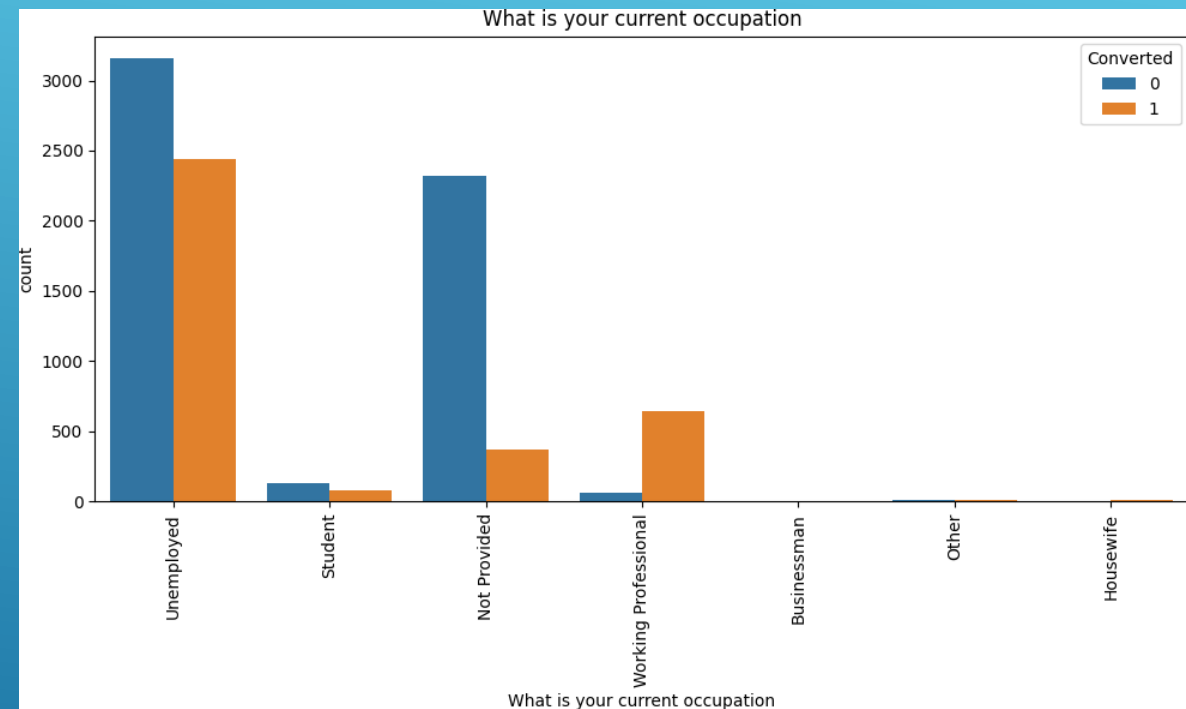
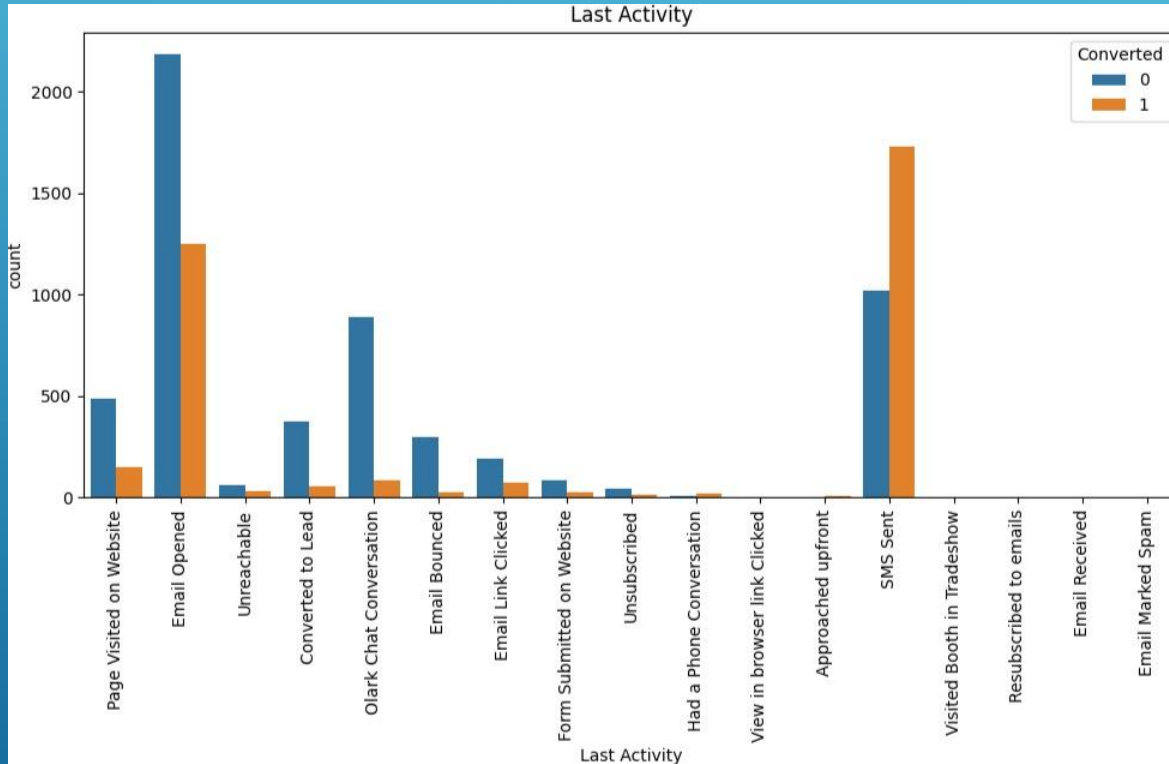
NOTABLE EDA CONCLUSIONS (CONT.)



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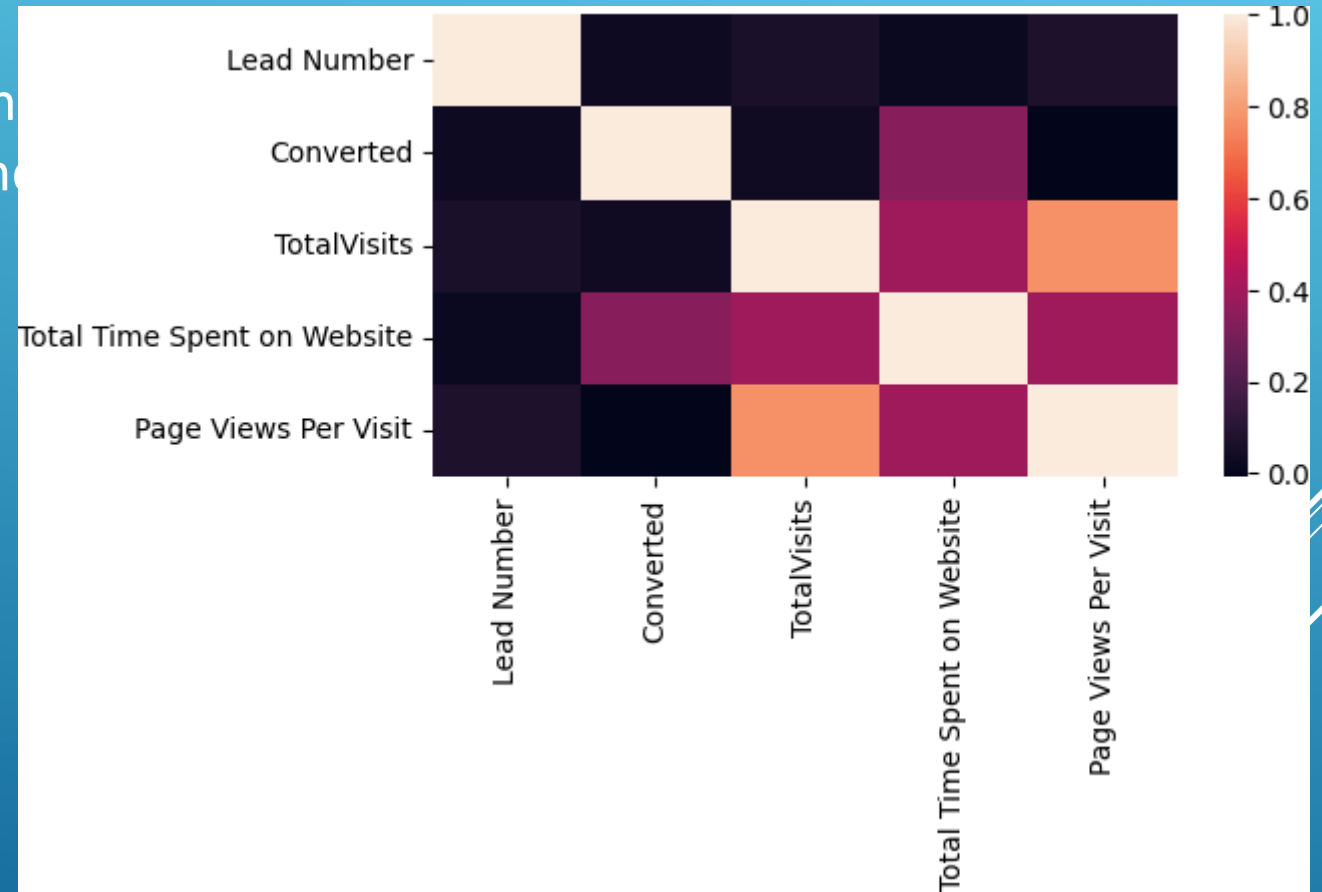
NOTABLE EDA CONCLUSIONS (CONT.)



NOTABLE EDA CONCLUSIONS (CONT.)

This correlation matrix displays high correlation between 'Converted' and

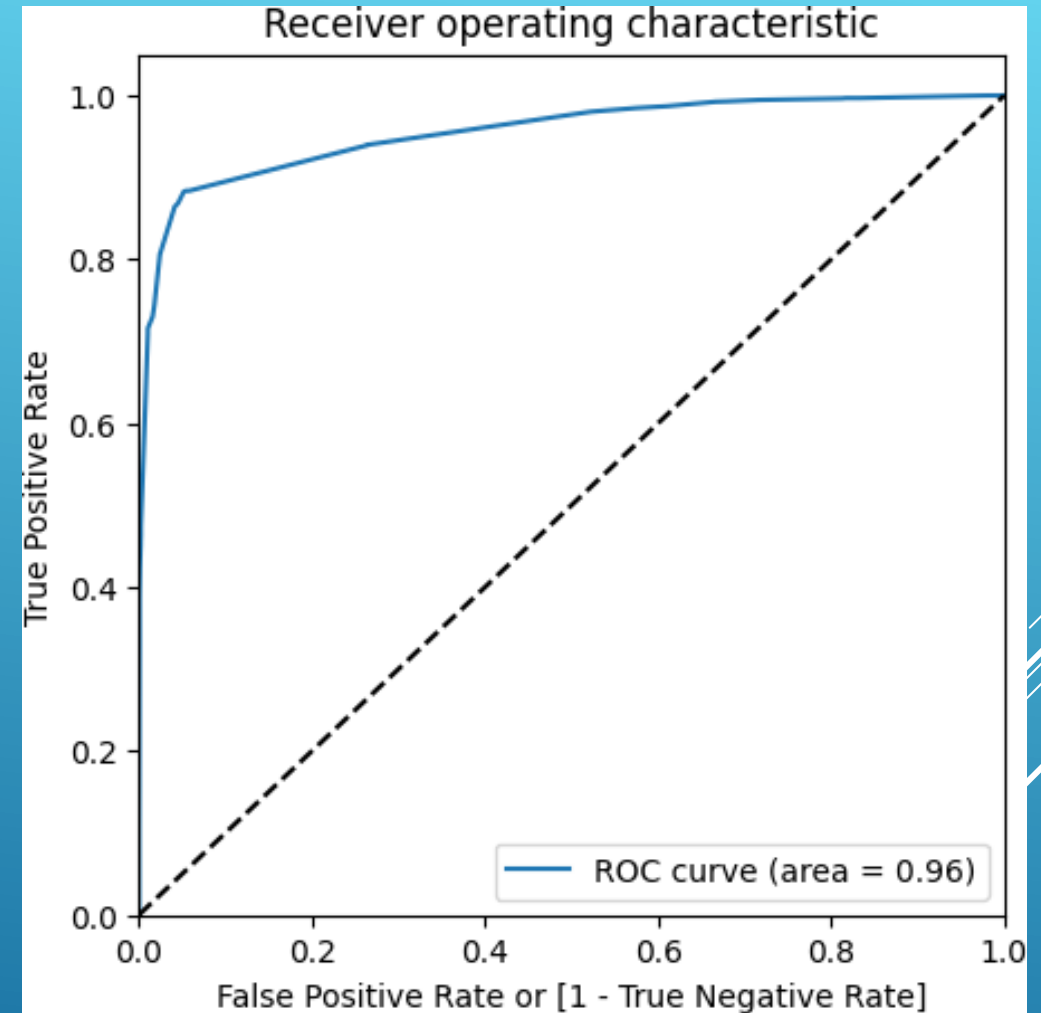
- Total visits
- Page views per visit
- Time spend on website



RESULTS

ROC Curve

- 96% of the area is under ROC curve.
- Classification Probability of lead conversion by the model is very high.



RESULTS

CONFUSION

Actual/Predicted	Not Converted	Converted
Not Converted	3499	204
Converted	259	1969

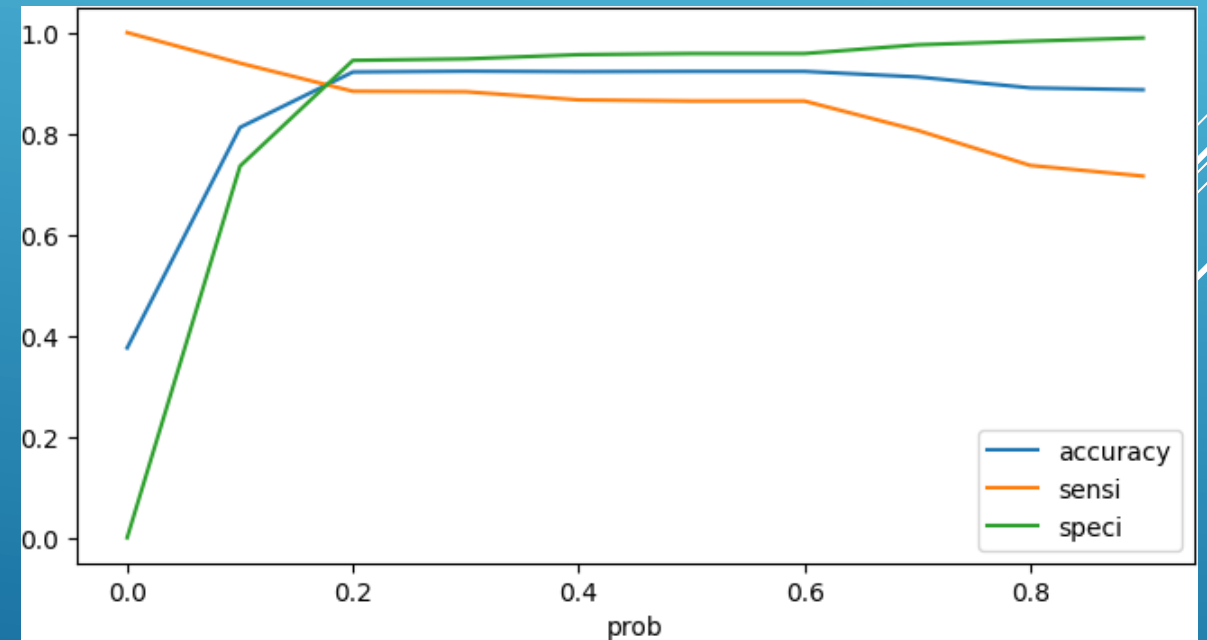
Optimal Probability Cut-off

With 0.2 cut-off, the model has:

Accuracy – 92%

Sensitivity – 88%

Specificity – 94%



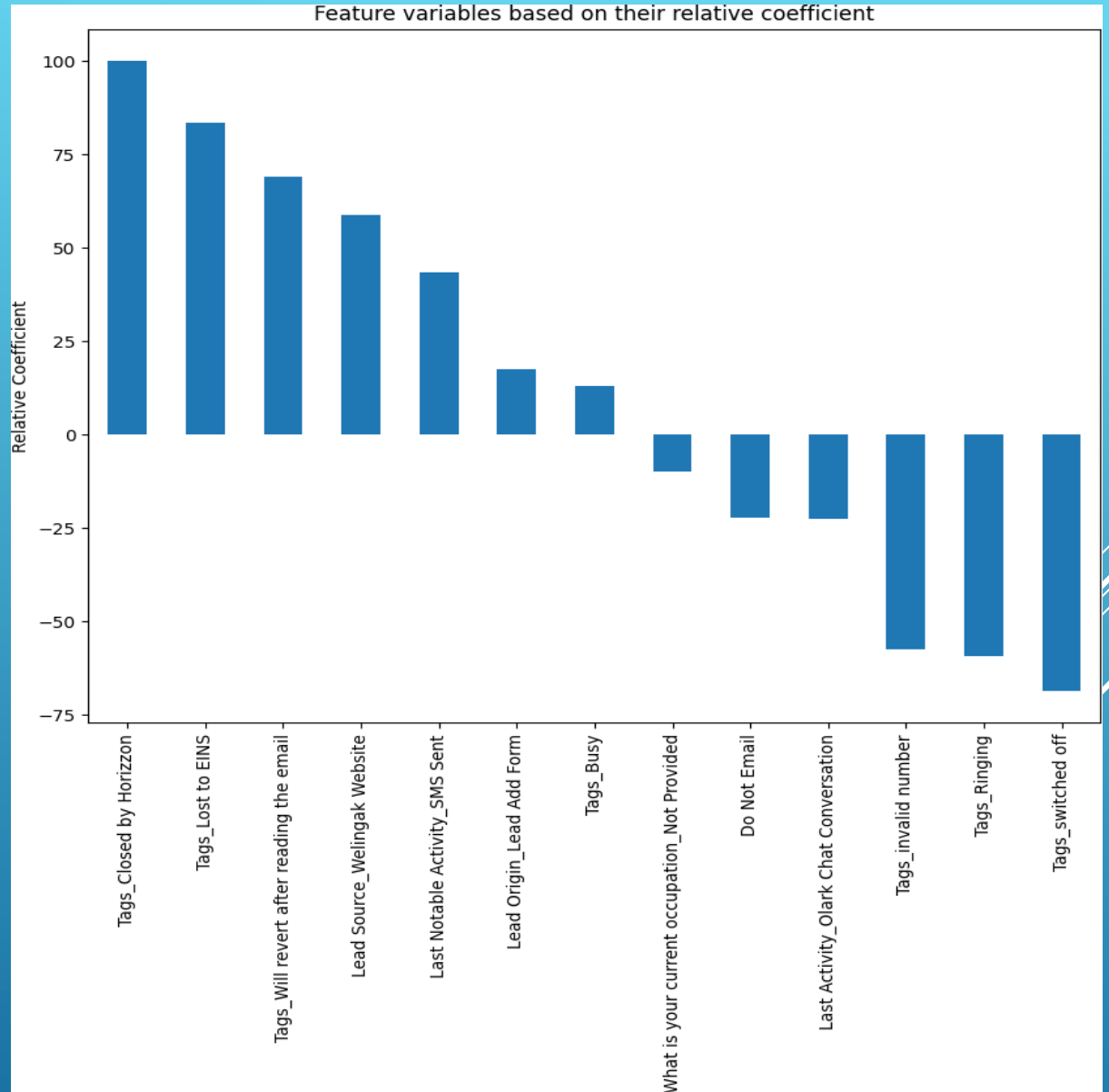
IMPORTANT FEATURES

Top 3 variables that have **high lead conversion probability**

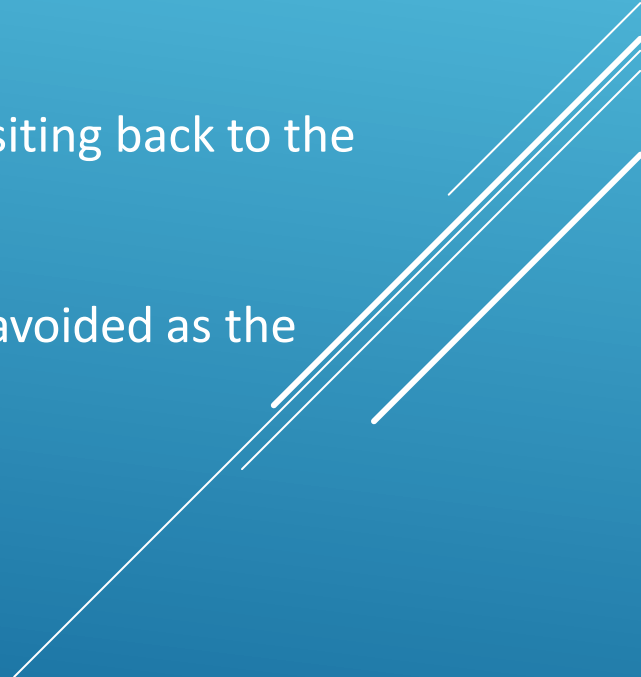
- Tags – Closed by Horizzon, Lost to EINS, Will revert after reading the email
- Lead Source – Welingak Website
- Last Notable Activity – SMS Sent

Top 3 variables that **need improvement** in converting quality lead

- Tags – Invalid Number
- Tags – Ringing
- Tags – Switched off



RECOMMENDATIONS

- **Follow ups** through calls and emails with high conversion probability leads is suggested.
 - Focus more on customers who spend a lot of time on the company's website as their conversion rate is high as per EDA.
 - Providing special offers to customers who are highly interested and are seen visiting back to the website.
 - Leads who have Tags such as 'Ringing', 'Switched Off', 'Invalid Number' can be avoided as the probability of them converting is very low.
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THANK YOU

