

Lead score assignment



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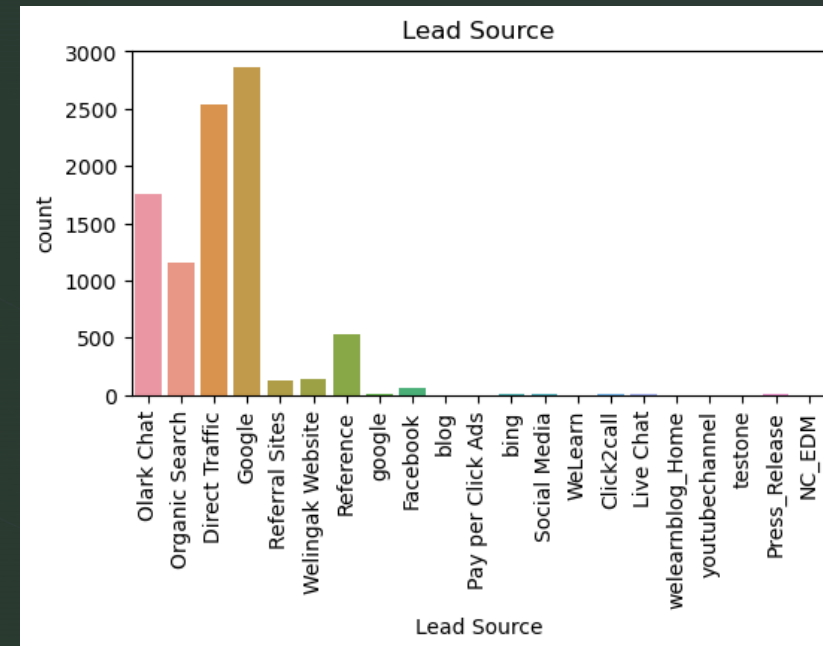
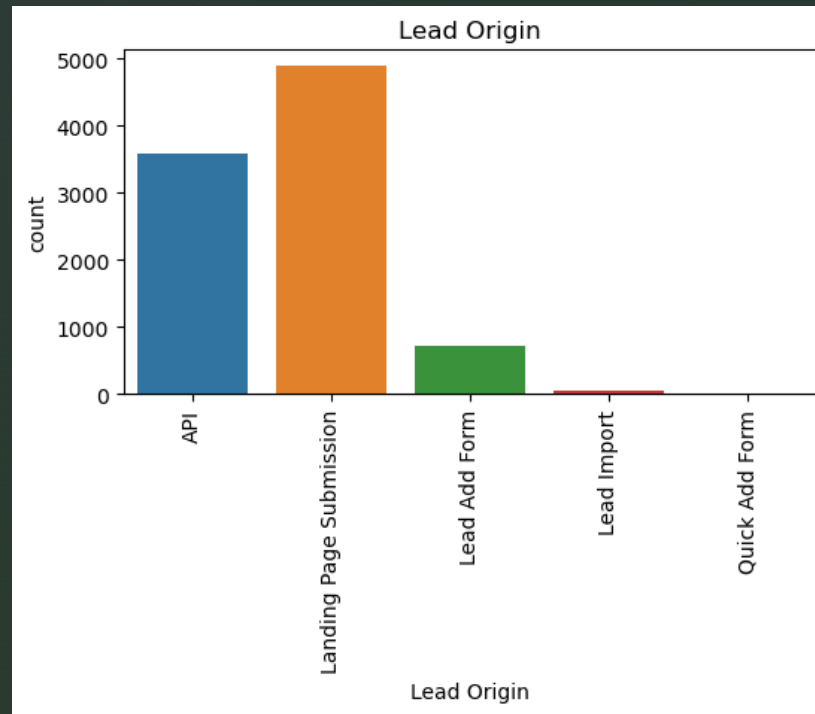
Problem statement :-

- ❑ X Education in the Ed-Tech industry sells online courses to industry professionals.
- ❑ Its lead conversion is very poor .
- ❑ the company wants to assign lead score to each using machine learning i.e by logistics regression

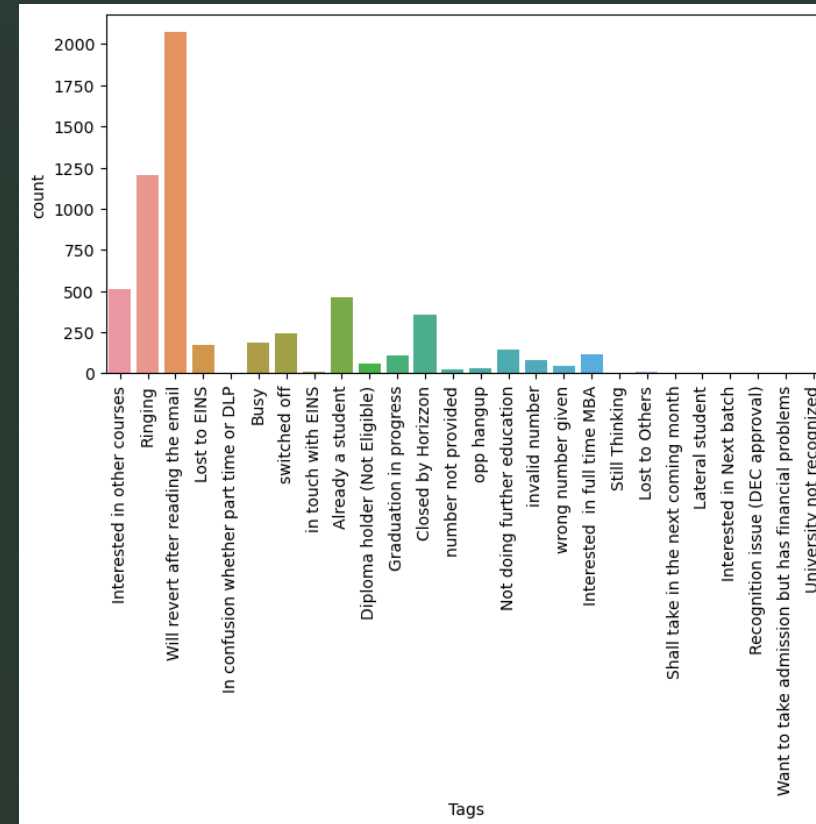
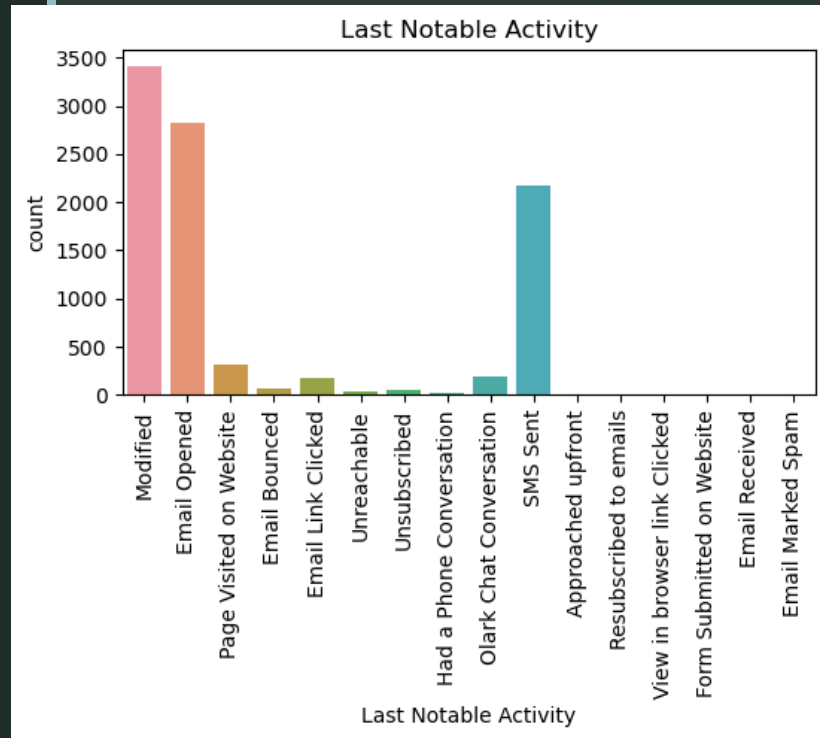
Approach followed :-

- ❑ Data reading and understanding
- ❑ Data cleaning manipulation
- ❑ Exploratory data analysis
- ❑ Data preprocessing
- ❑ Model Building
- ❑ Model Evaluation
- ❑ Predictions
- ❑ Conclusions and Eeommendations

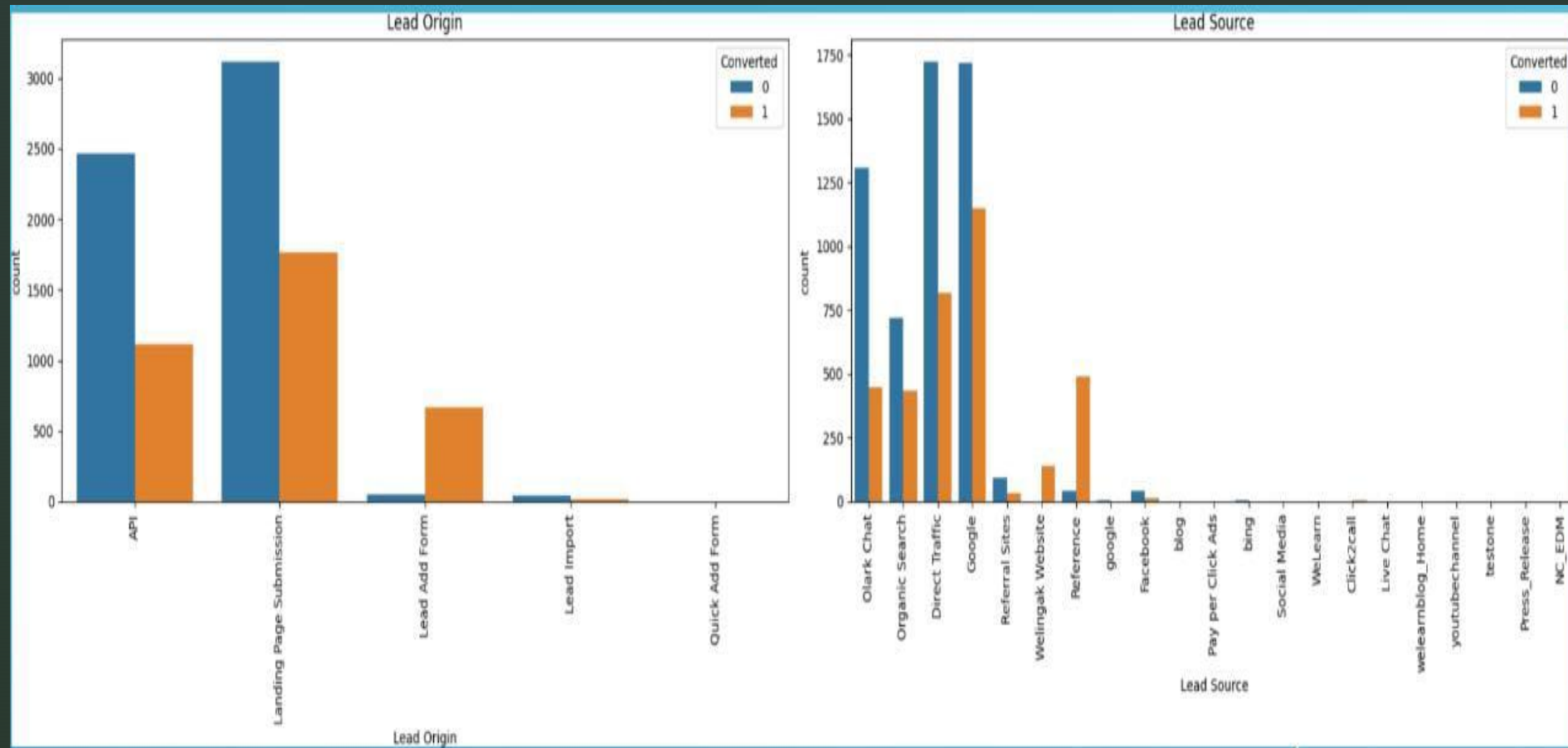
EDA visual insight :-



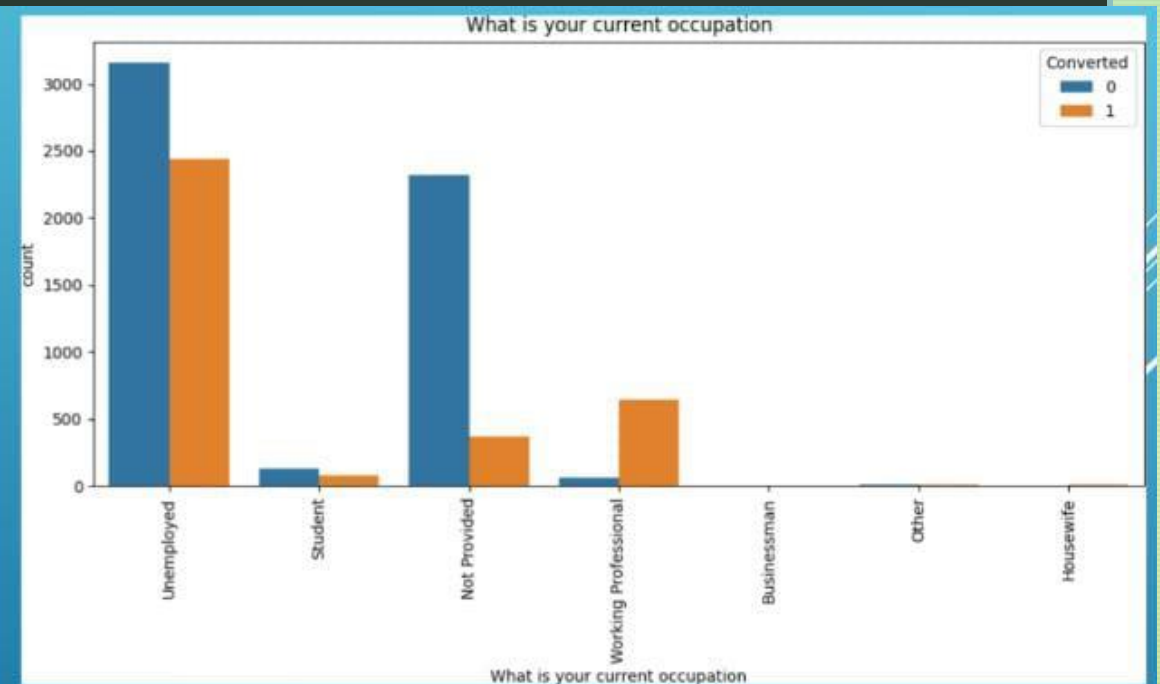
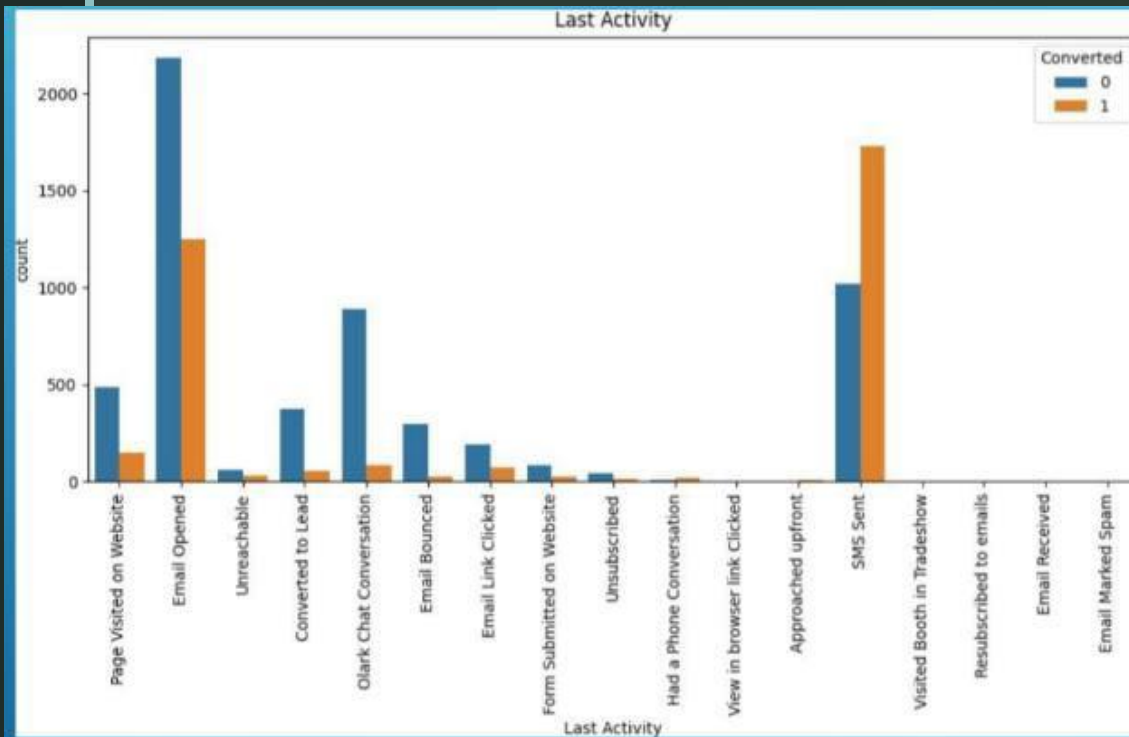
EDA visuals insights :-



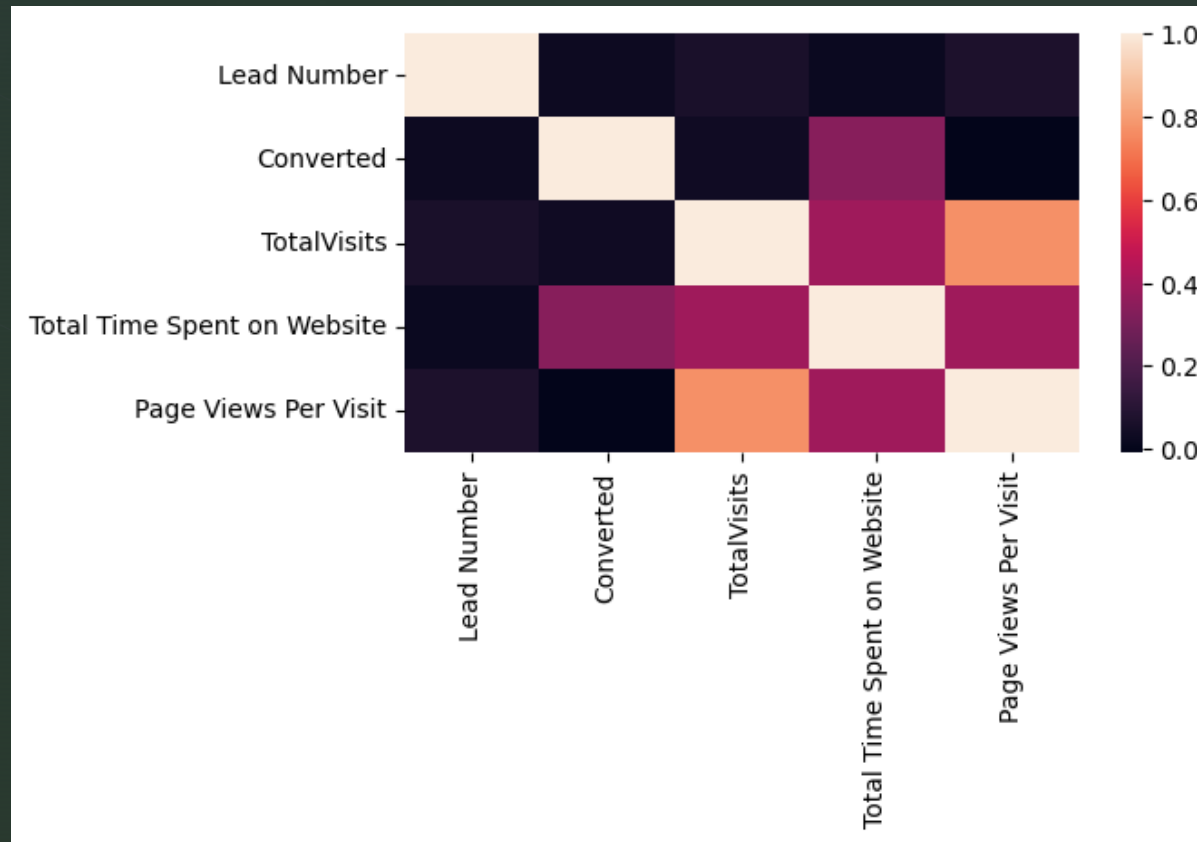
Variable relation with converted :-



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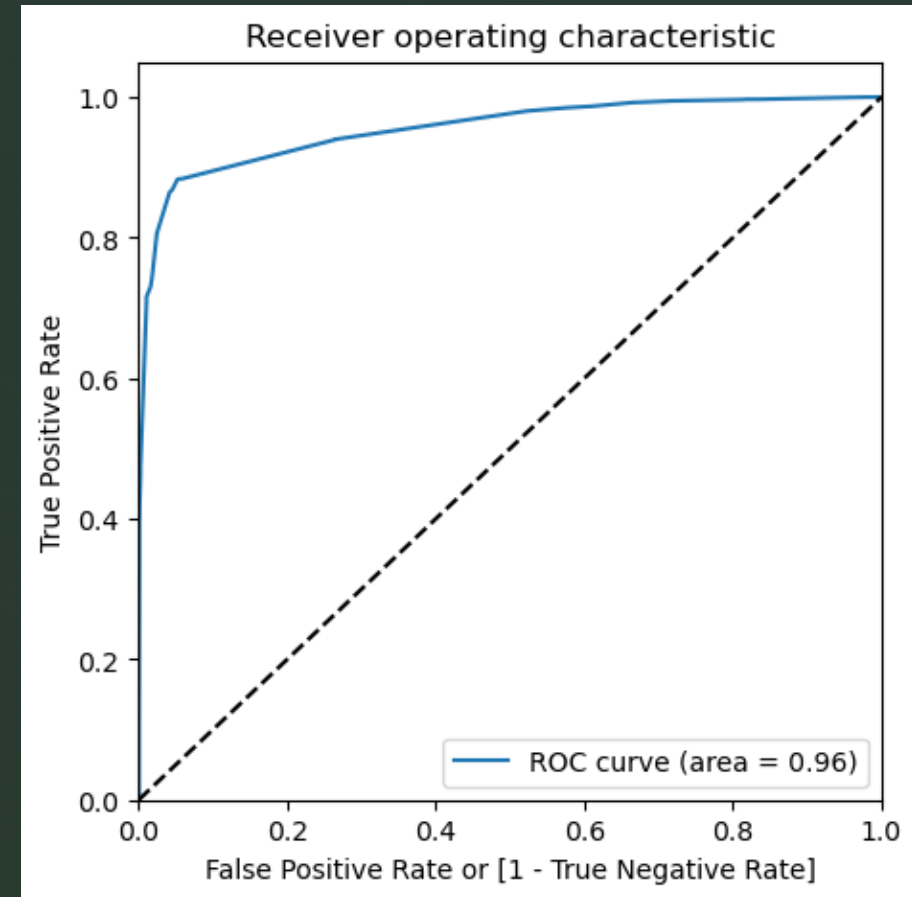
Highly correlated variable with converted :-



Result :-

ROC Curve

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



Result :-

Confusion Matrix:

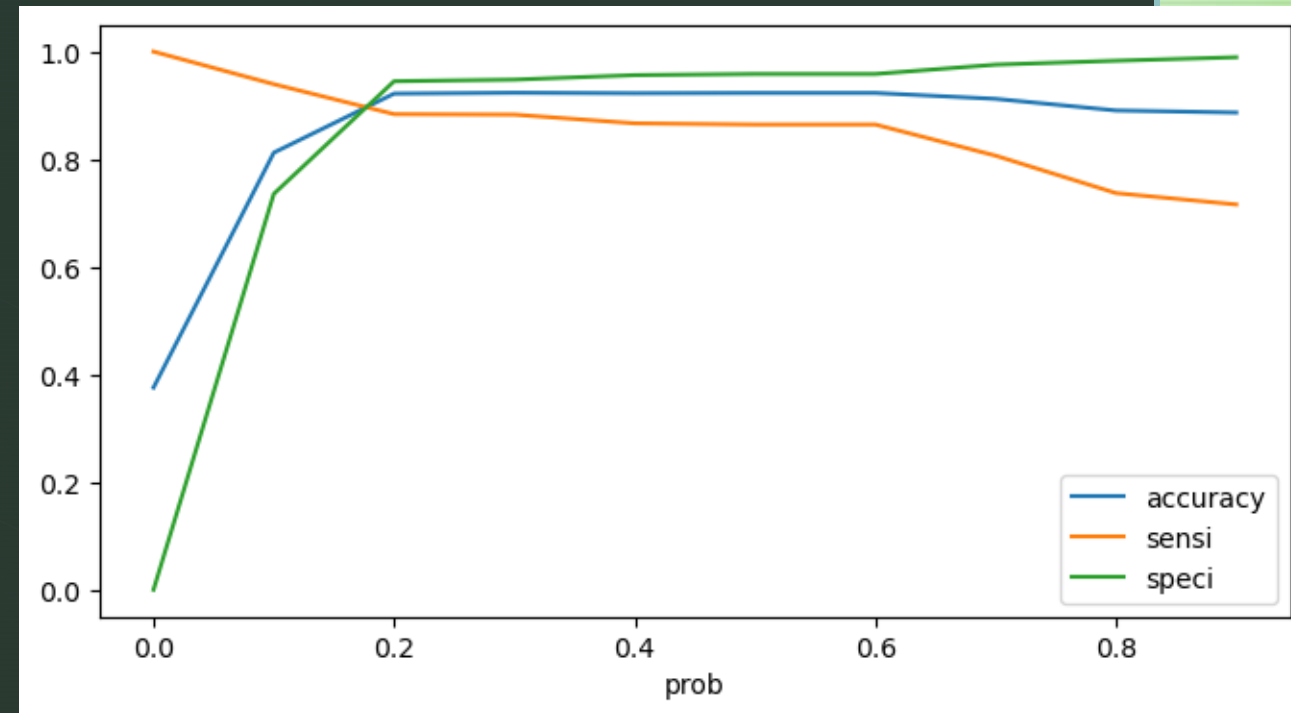
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[[3499 204]
 [ 259 1969]]
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Optimal Probability Cut-off With 0.2 cut-off, the model has:

Accuracy – 92%

Sensitivity – 88%

Specificity – 94%



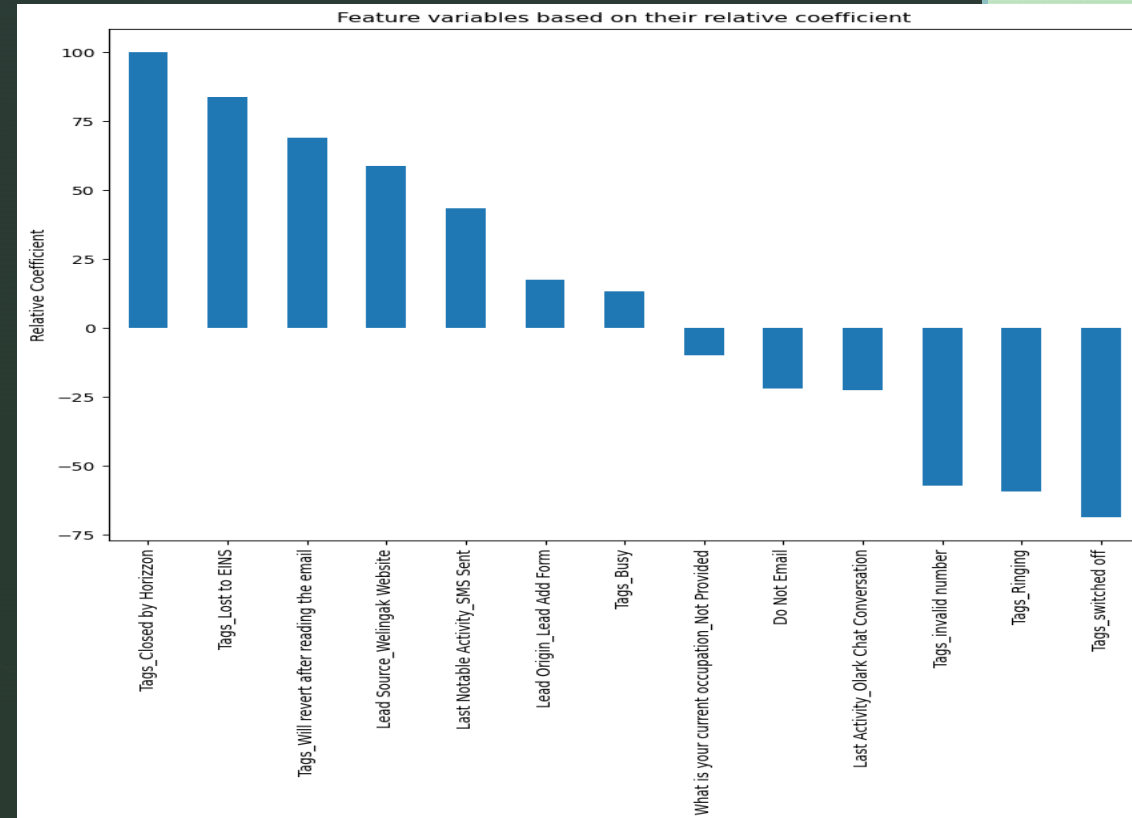
Important Feature :-

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



Recommendation :-



- Key learnings from this assignment include:
 - Understanding the process of data exploration and handling missing values.
- - Recognizing the importance of performing EDA and data pre-processing.
- - Implementing a systematic approach for model building and feature selection, considering the impact on both training and test datasets.
- Successfully solving problems through teamwork and leveraging individual strengths.



Thank you

