

LEAD SCORE CASE STUDY

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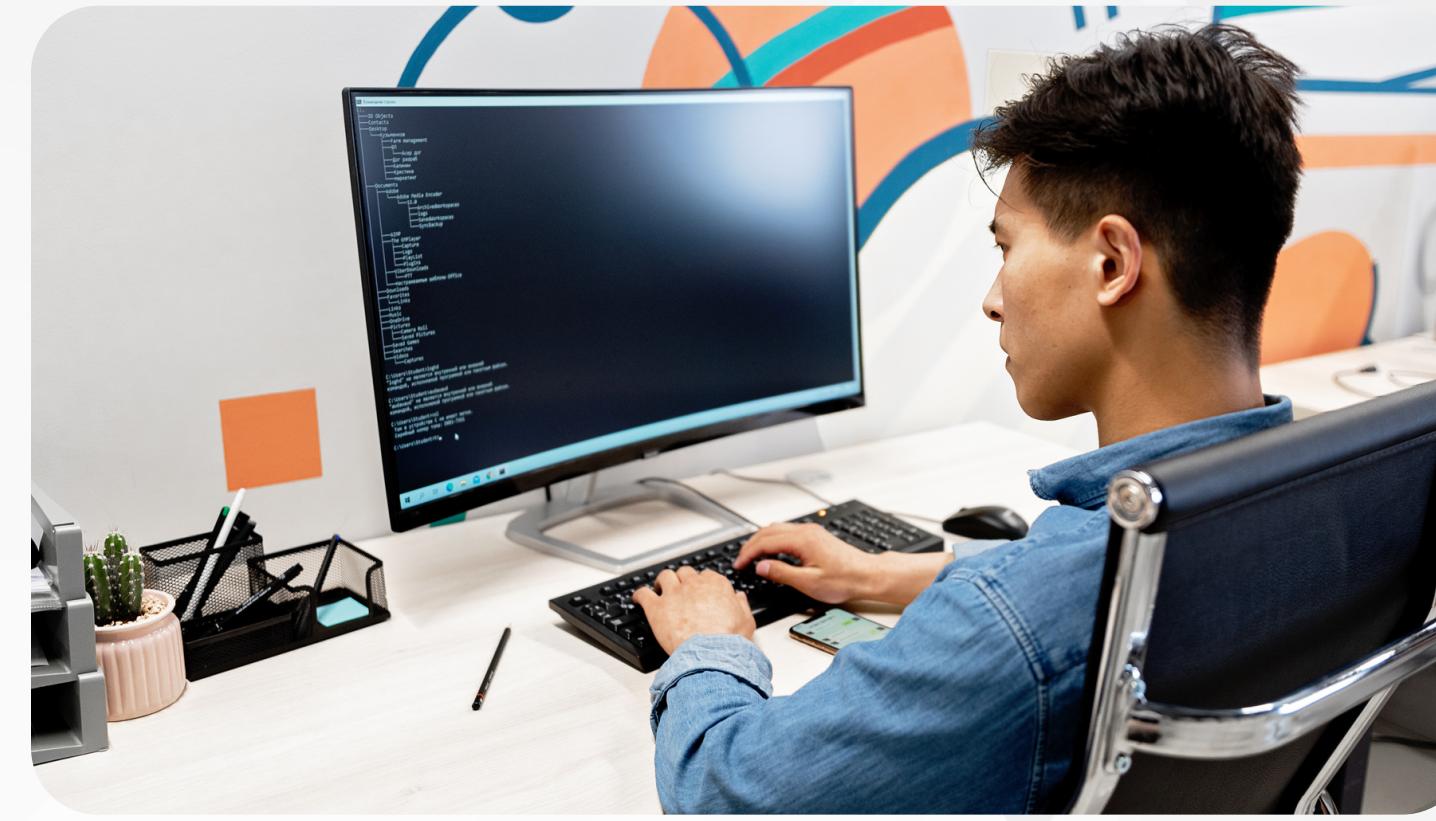
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OUR PROBLEM

An X Education need help to select the most promising leads, i.e. the leads that are most likely to convert into paying customers. The company requires us to build a model wherein you need to assign a lead score 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%.



ABOUT GOAL

There are quite a few goals for this case study.

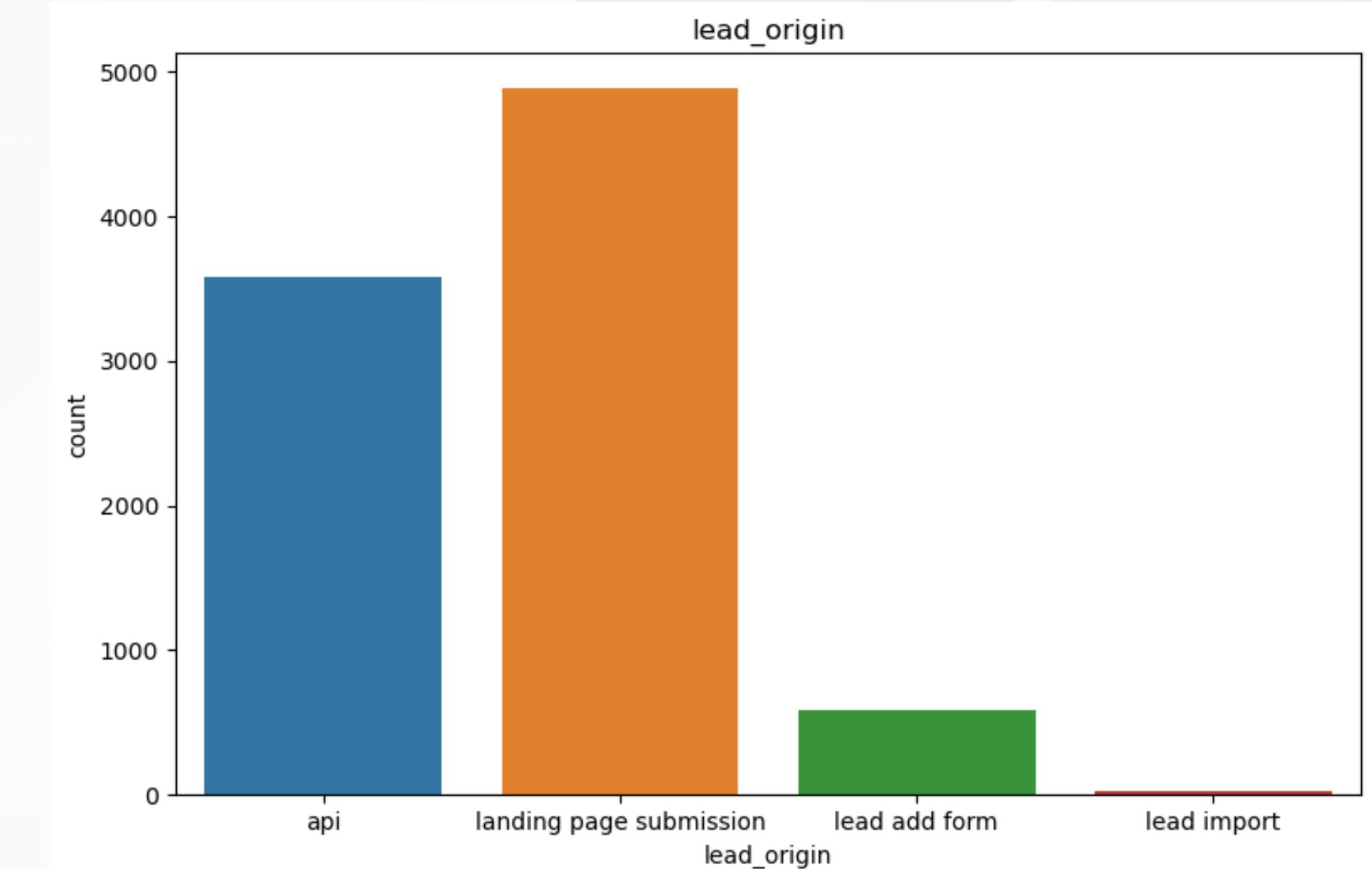
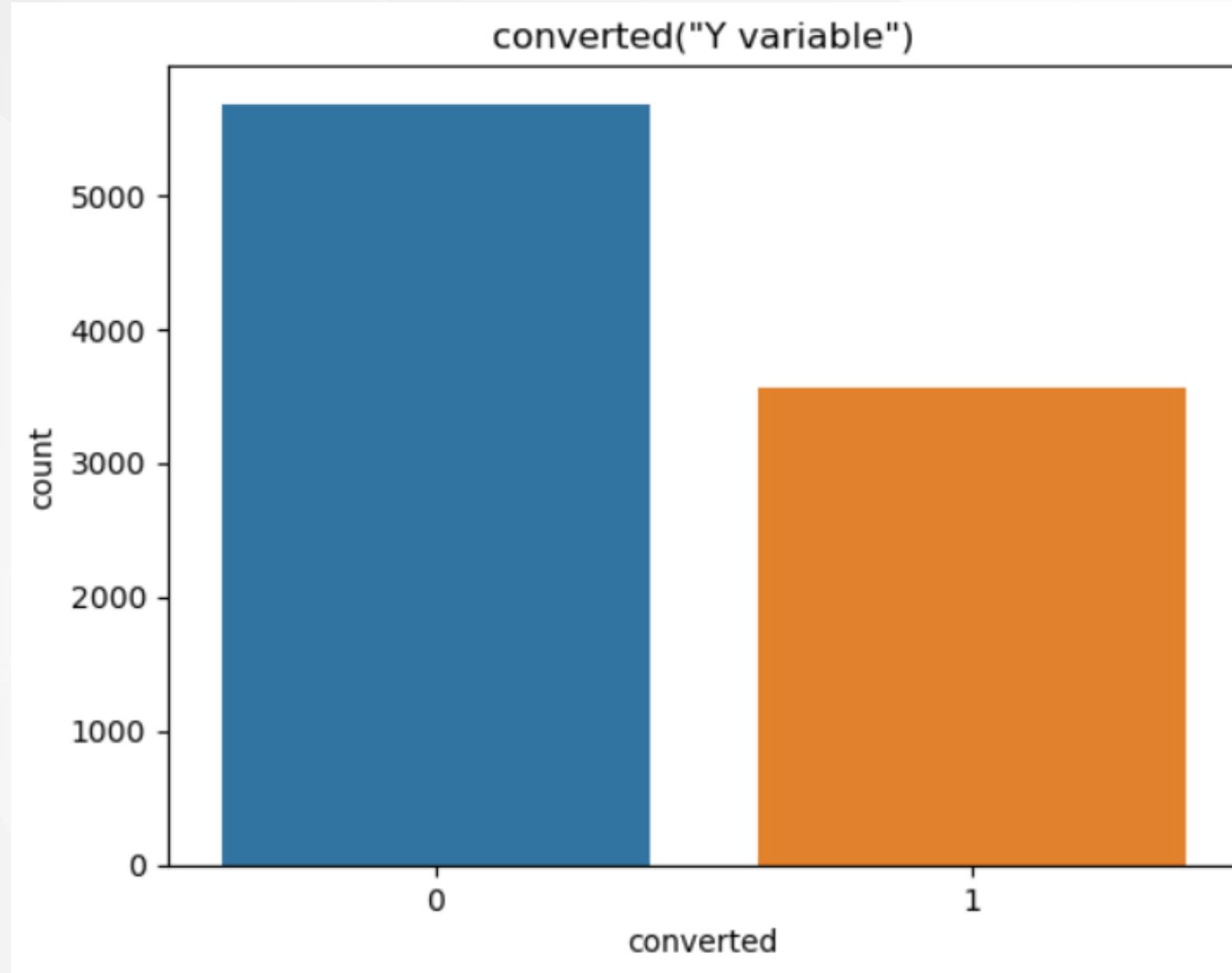
- Build a logistic regression model to assign a lead score between 0 and 100 to each of the leads which can be used by the company to target potential leads. A higher score would mean that the lead is hot, i.e. is most likely to convert whereas a lower score would mean that the lead is cold and will mostly not get converted.
- There are some more problems presented by the company which your model should be able to adjust to if the company's requirement changes in the future so you will need to handle these as well. These problems are provided in a separate doc file. Please fill it based on the logistic regression model you got in the first step. Also, make sure you include this in your final PPT where you'll make recommendations.



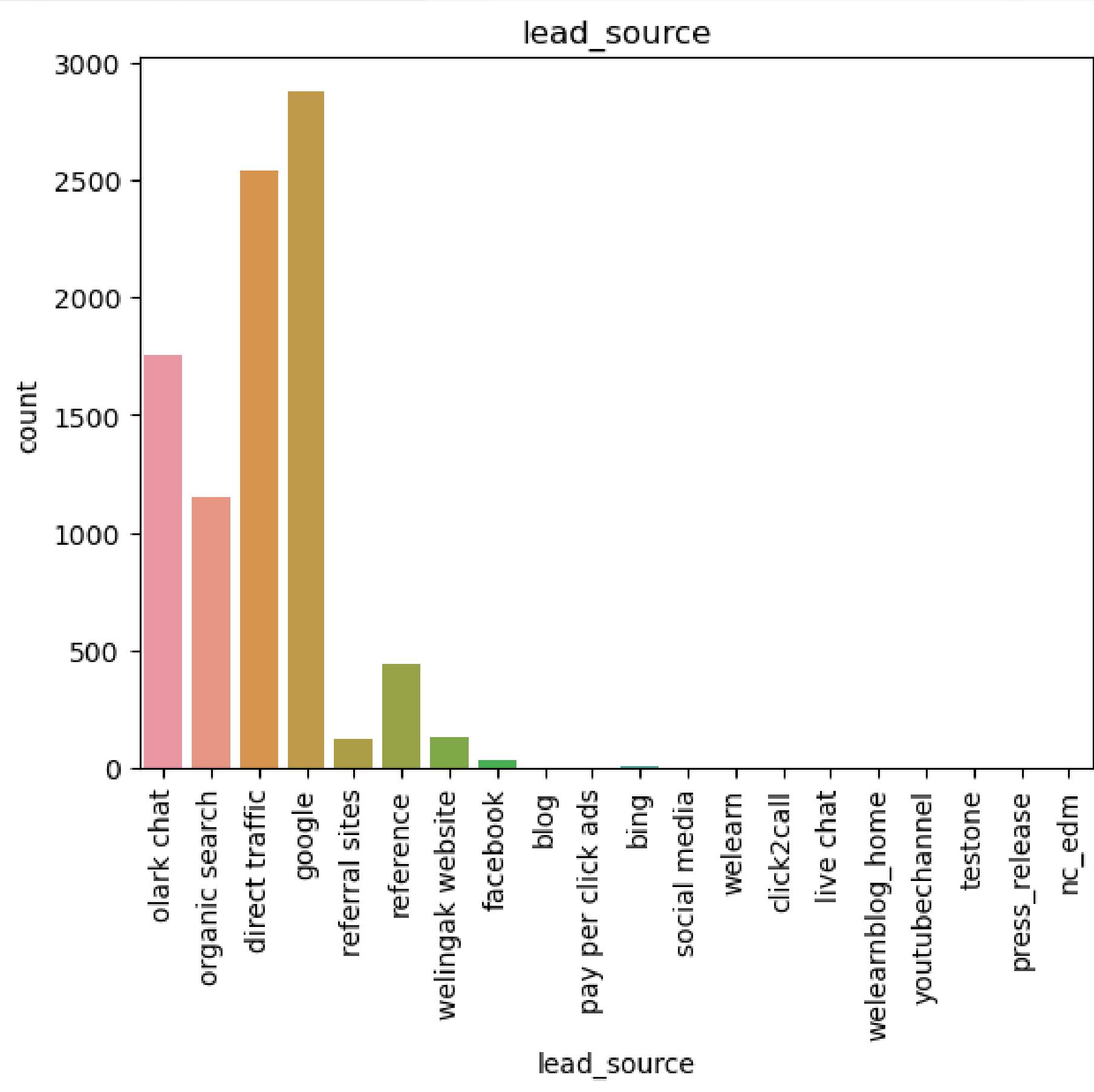
STEPS TAKEN

1. Data Cleaning & Manipulation.
2. EDA
3. Feature Scaling & Dummy Variables and encoding of the data
4. Classification technique: logistic regression used for the model making and prediction
5. Validation of Model
6. Model Presentation
7. Conclusion and Recommendation

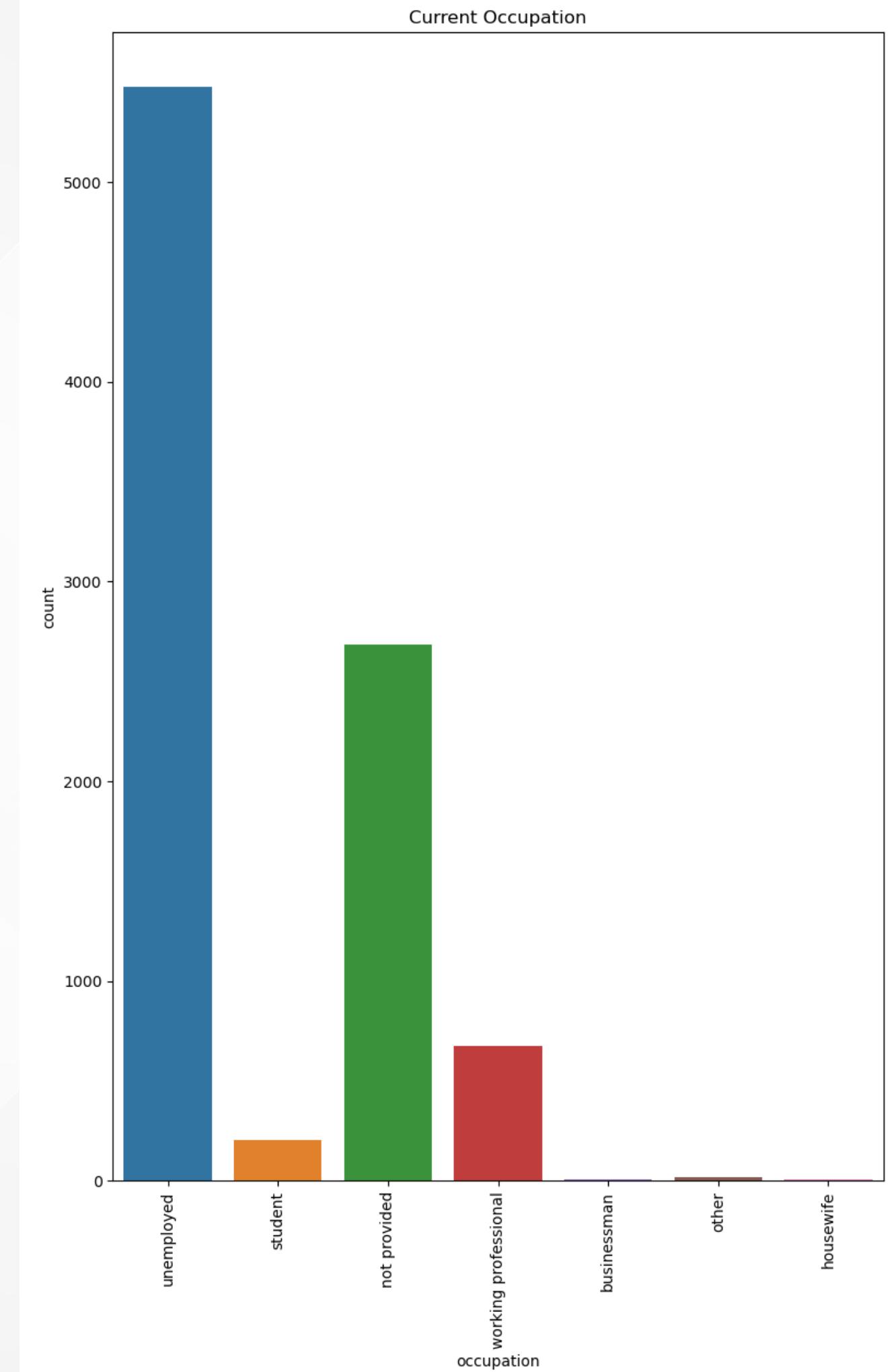
EDA CONCEPT



From this we can say that majority of leads could not be converted. Roughly around 60% leads was never converted and rest were converted



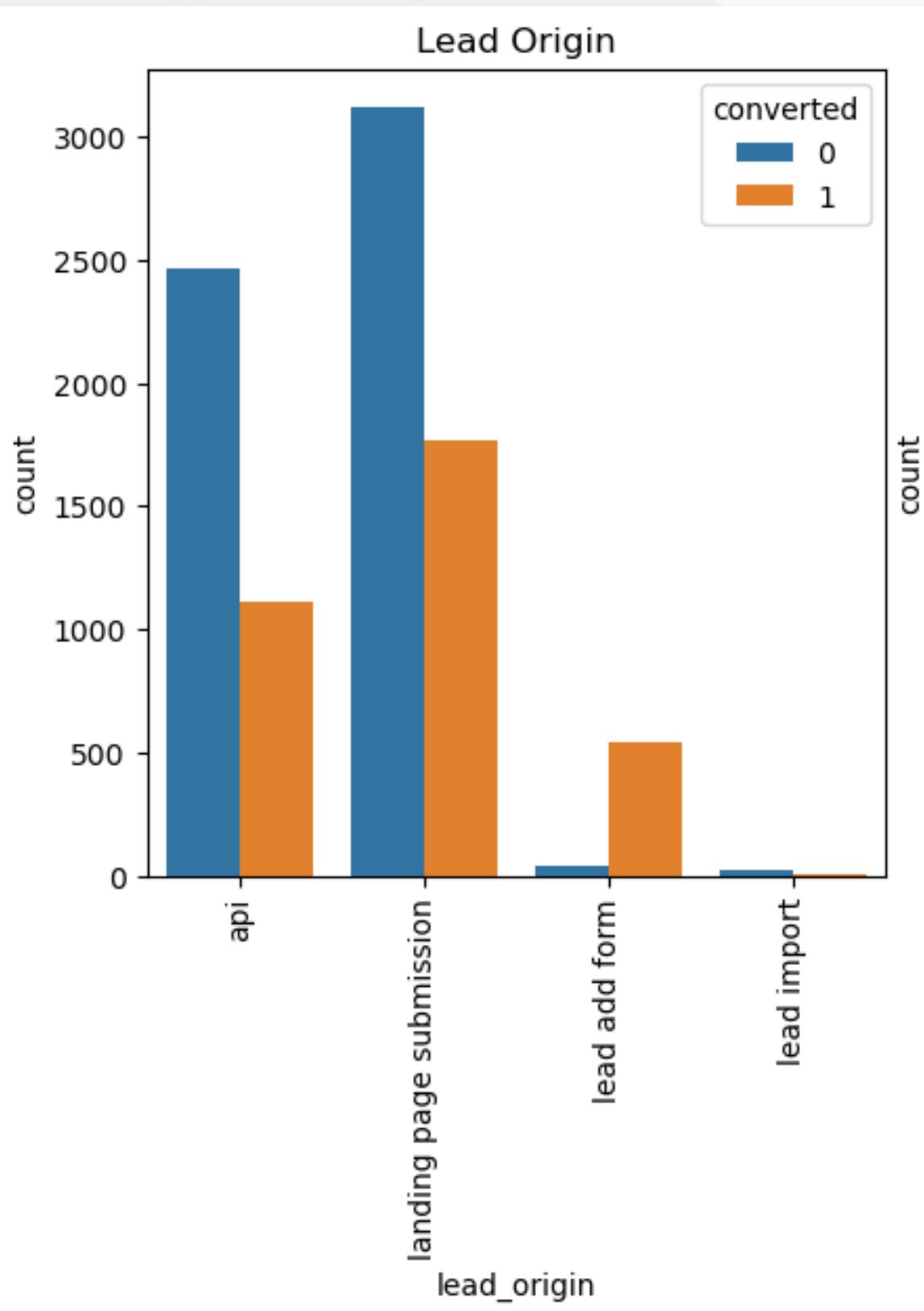
Insights on next page



PREVIOUS INSIGHTS

Here is the list some top features which can be found while plotting.

- Lead Origin : About 50 to 55 % is from landing page submission and about 35% from API.
- Seeing about the occupation, most of them are unemployed.
- Also most of them have opted out for email of the course.
- Lead source have different features or source like google , direct traffic, olark chart, where google top with most no of leads in sources.

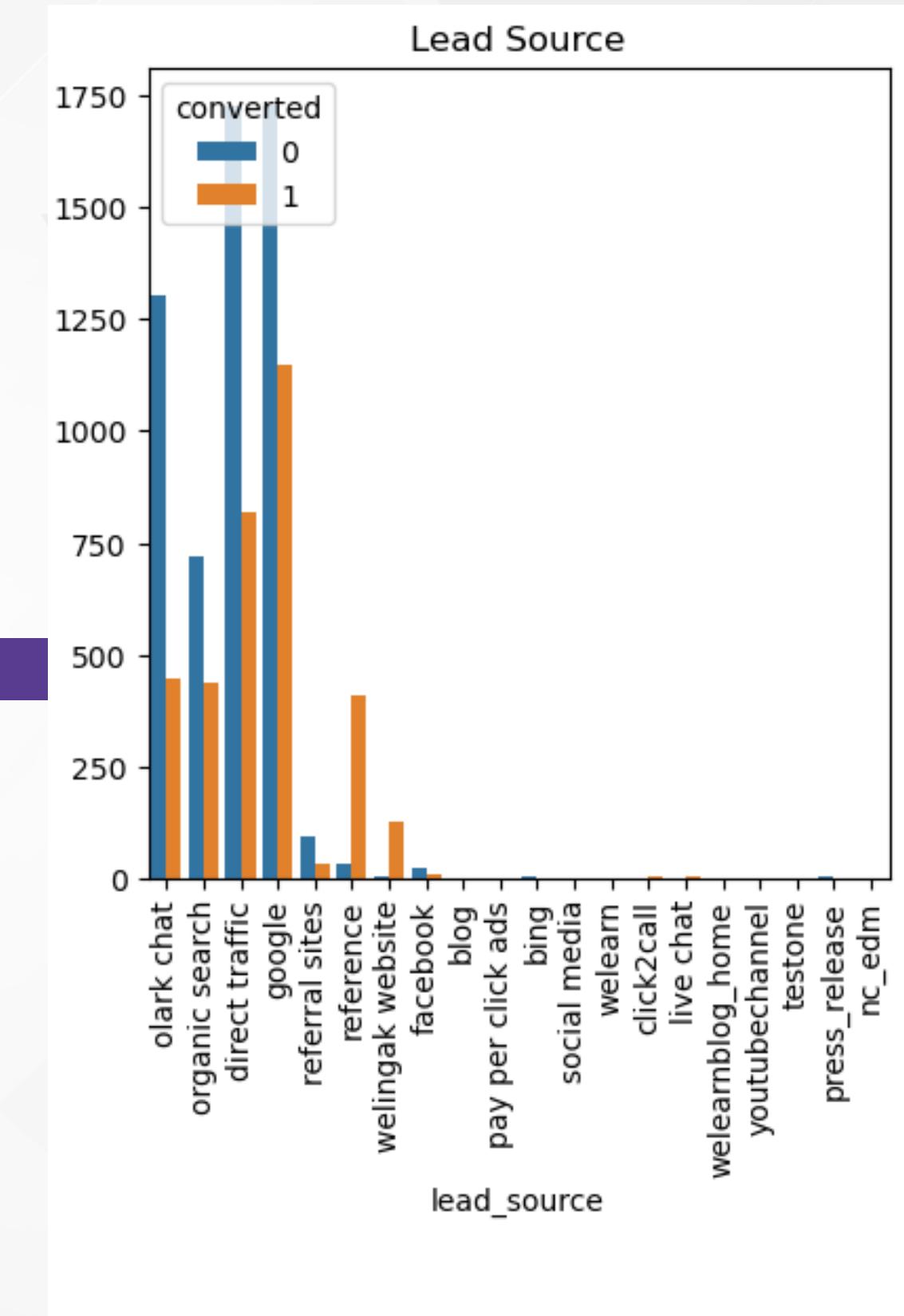


LEAD ORIGIN

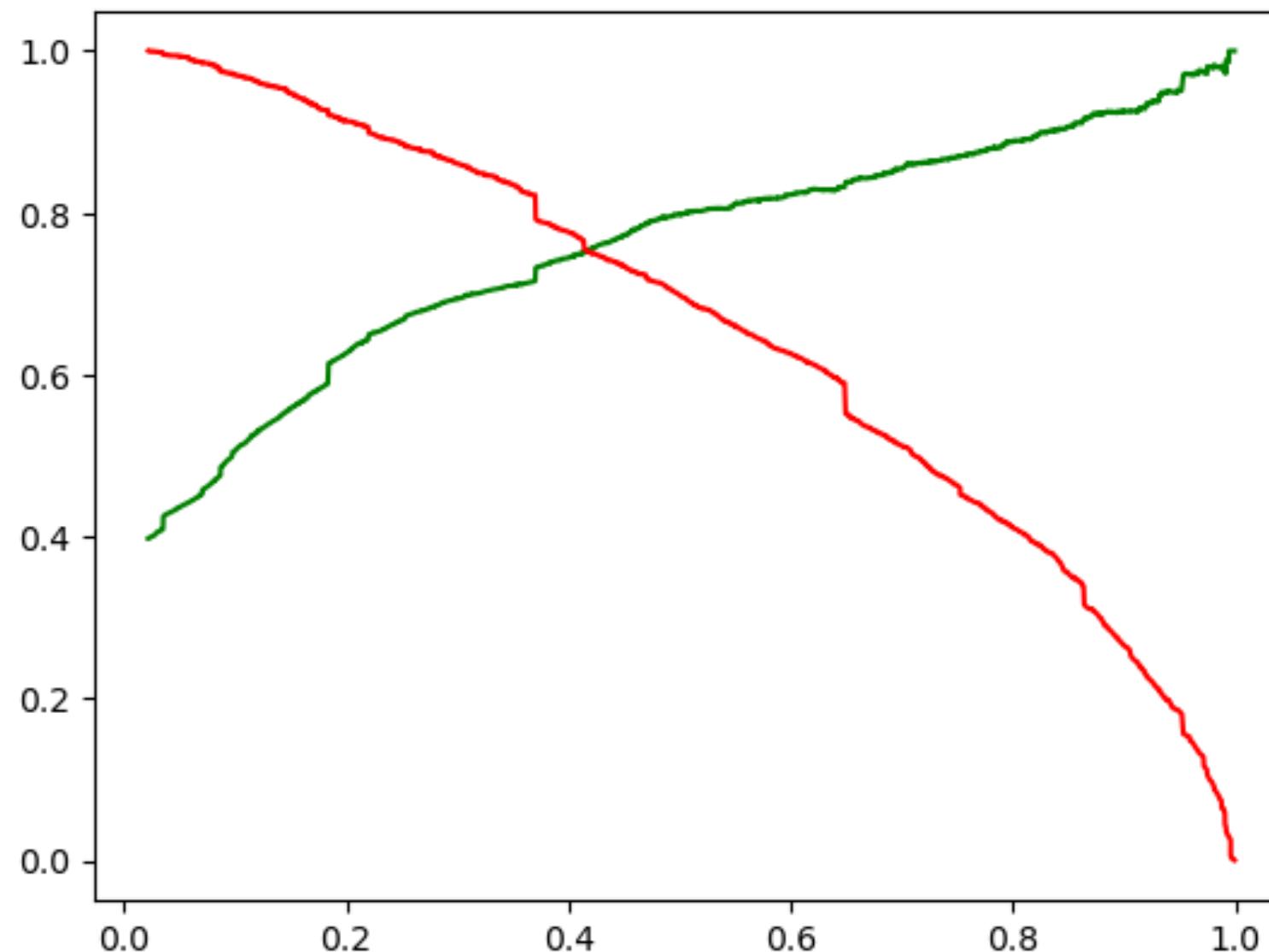
About 55 to 60% lead from landing page submission are converted and about 45% were converted from API

LEAD SOURCE

Almost most of the lead from google were converted with 25 to 35% of the direct traffic were one of the converted



MODEL EVALUTION



```
metrics.accuracy_score(y_train_pred_final.Converted, y_train_pred_final.final_predicted)
```

0.8113682884585105

```
TP / (TP + FP)
```

0.7492076069730587

```
TP / (TP + FN)
```

0.7699511400651465

This cut off was 0.41.
the accuracy score is about 81%
Precision is about 75%
Recall is about 77%

MODEL EVALUTION

```
metrics.accuracy_score(y_pred_final['converted'], y_pred_final.final_predicted)
```

```
0.8163789937568858
```

```
TP / (TP+FN)
```

```
0.7936670071501533
```

```
TN / (TN+FP)
```

```
0.8291284403669725
```

This cut off was 0.38.
The accuracy, sensitivity and specificity is around 80%.

CASE STUDY RECOMMENDATION

To get better lead conversion, X Education can use this tips mention bellow:

- When developing focused marketing tactics, concentrate on features with positive coefficients.
- Create tactics to entice top-performing lead sources to send you high-quality leads.
- Rewards/discounts for submitting references that result in leads, which encourages submission of more references.
- Engage working professionals with tailored messaging.
- Working professionals should be aggressively targeted because they convert well and are more likely to have the money to pay higher fees.
- Achieve communication channel optimization based on impact of lead engagement.
- The Welingak website could benefit from more funding for things like advertising.

Areas of improvement :

- Analyze negative coefficients in specialization offerings.
- Examine the landing page submission procedure for potential improvements.



THANK YOU

For any query kindly contact us on below mail.



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