

The background is a dark blue gradient with a subtle pattern of white dots. Overlaid on the left side are several concentric circles and a large circular scale. The scale has numerical markings from 140 to 260 in increments of 10, with smaller tick marks between them. Several curved arrows, some solid and some dashed, point in various directions across the scene, suggesting a sense of motion or a complex process.

LEAD SCORING CASE STUDY USING LOGISTIC REGRESSION

CONTENTS

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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. They have process of form filling on their website after which the company that individual as a lead.
- 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%. Now, this means if, say, they acquire 100 leads in a day, only about 30 of them are converted. To make this process more efficient, the company wishes to identify the most potential leads, also known as Hot Leads.
- f 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

BUSINESS OBJECTIVE

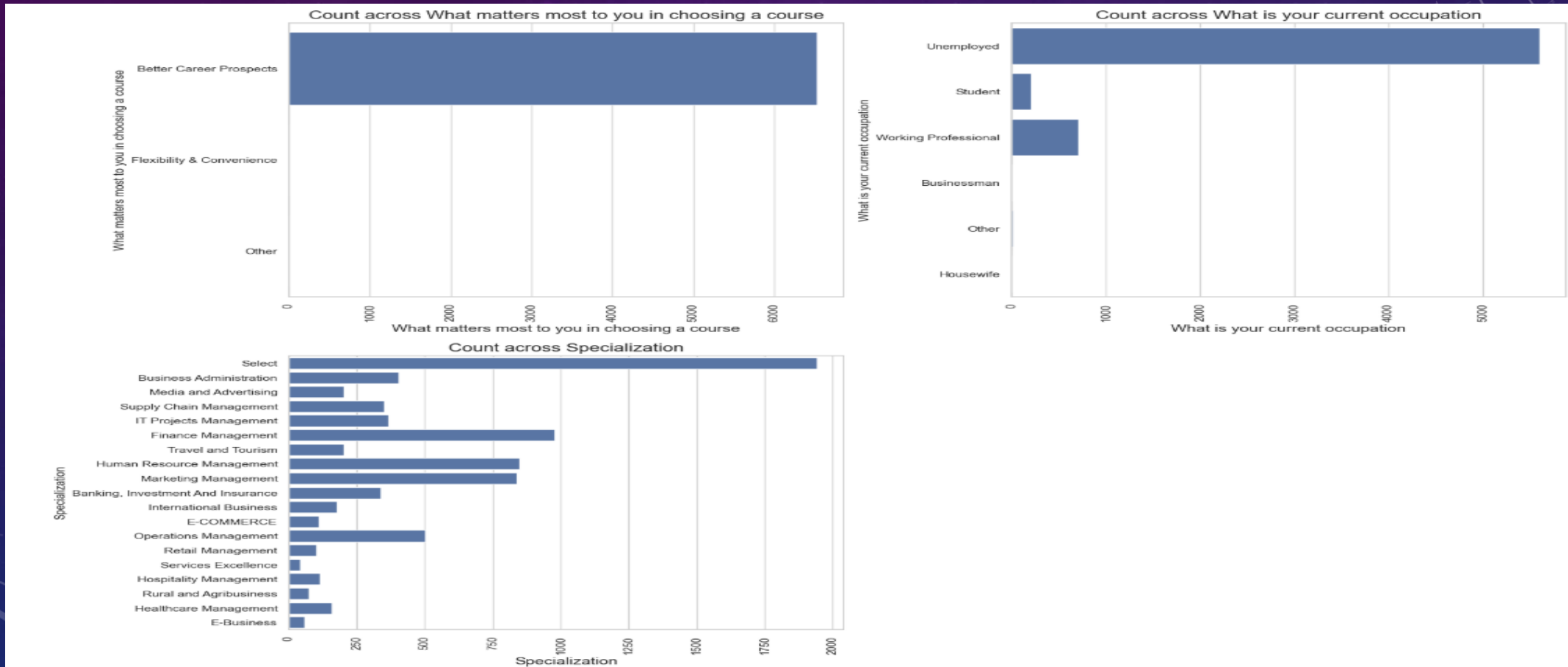
- Lead X wants us to build a model to give every lead a lead score between 0 -100 . So that they can identify the Hot leads and increase their conversion rate as well.
- The CEO want to achieve a lead conversion rate of 80%.
- They want the model to be able to handle future constraints as well like Peak time actions required, how to utilize full man power and after achieving target what should be the approaches.

PROBLEM APPROACH

- Importing the data and inspecting the data frame
- Data preparation
- EDA
- Dummy variable creation
- Test-Train split
- Feature scaling
- Correlations
- Model Building (RFE Rsquared VIF and pvalues)
- Model Evaluation
- Making predictions on test set

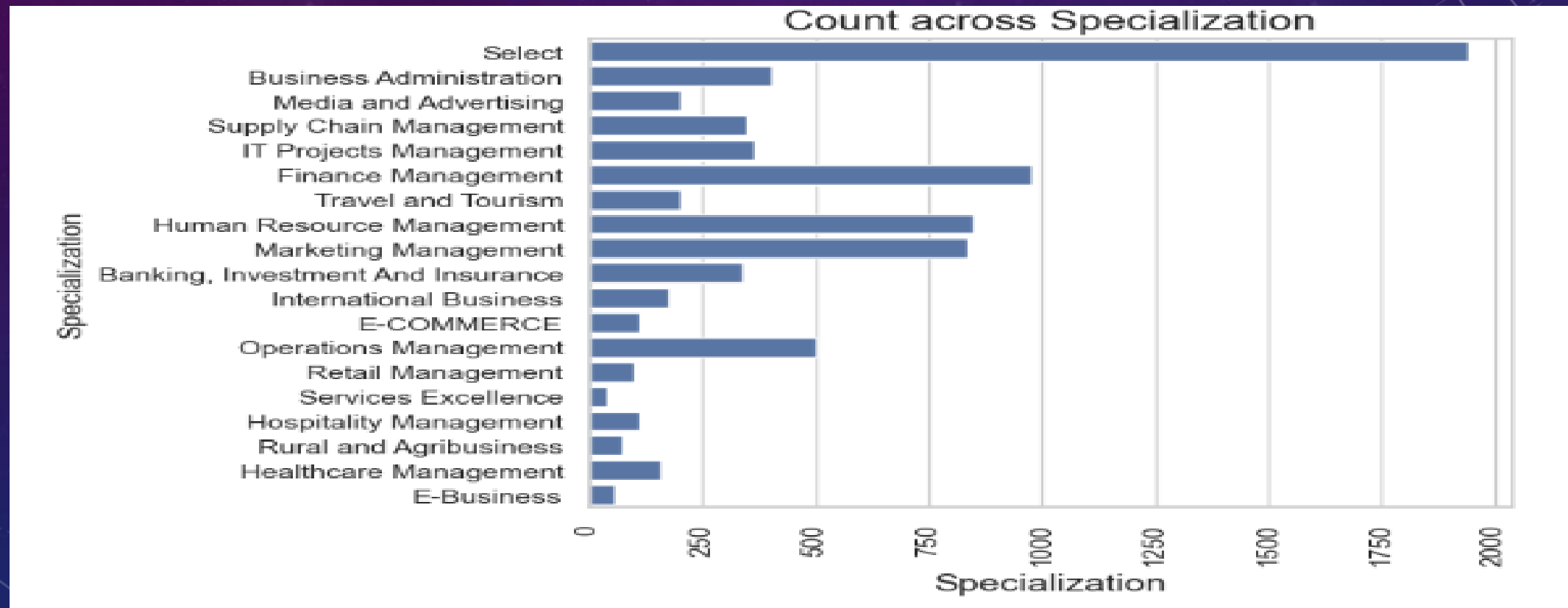
EDA – DATA CLEANING

There are a few columns in which there is a level called 'select' which is taking care



SPECIALIZATION

Leads from HR, finance & marketing management specializations are high probability to convert



OBSERVATIONS

- Final Features list:
 - Lead Source_Olark Chat
 - Specialization_Others
 - Lead Origin_Lead Add Form
 - Lead Source_Welingak Website
 - Total Time Spent on Website
 - Lead Origin_Landing Page Submission
 - What is your current occupation_Working Professionals
 - Do Not Email

Train Data:

Accuracy : 80%

Sensitivity : 77%

Specificity : 80%

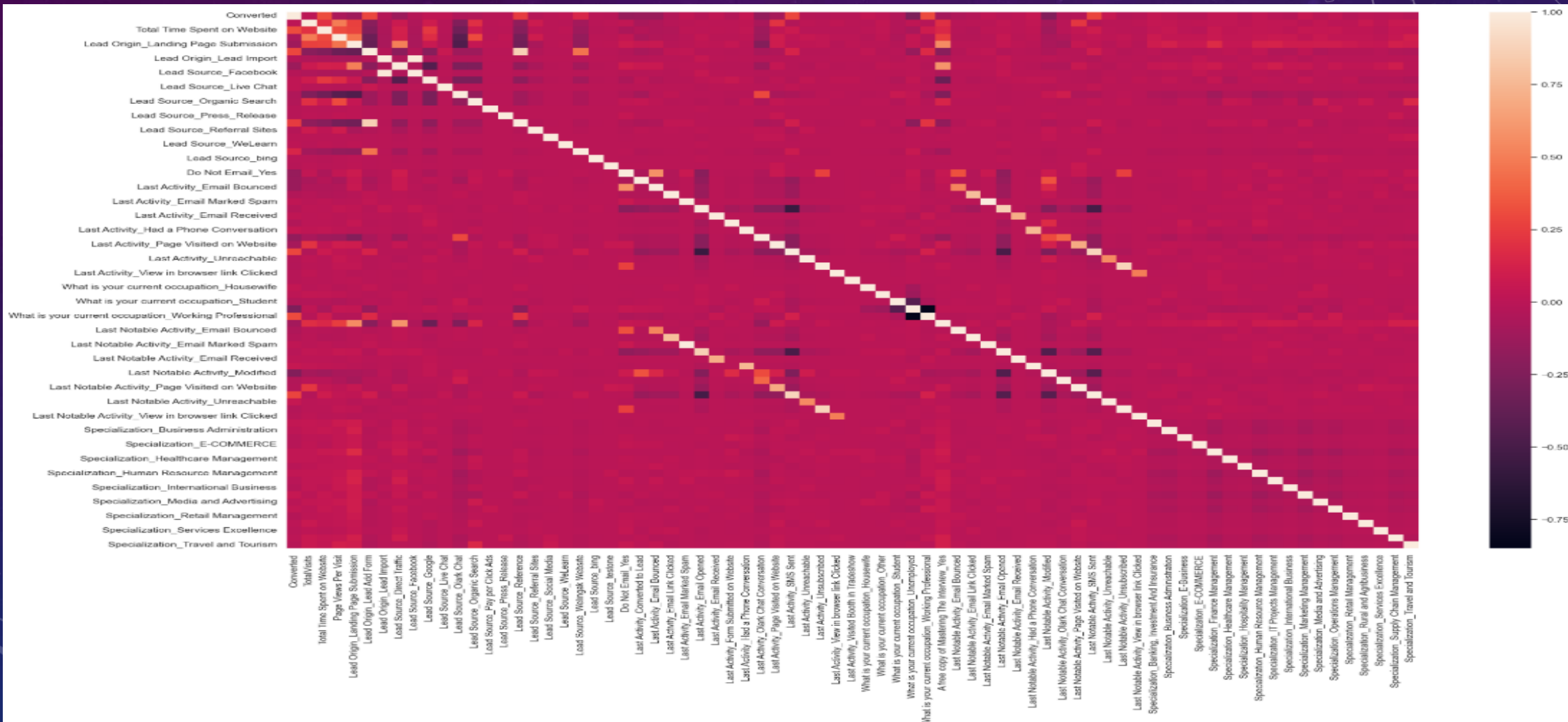
Test Data:

Accuracy : 80%

Sensitivity : 77%

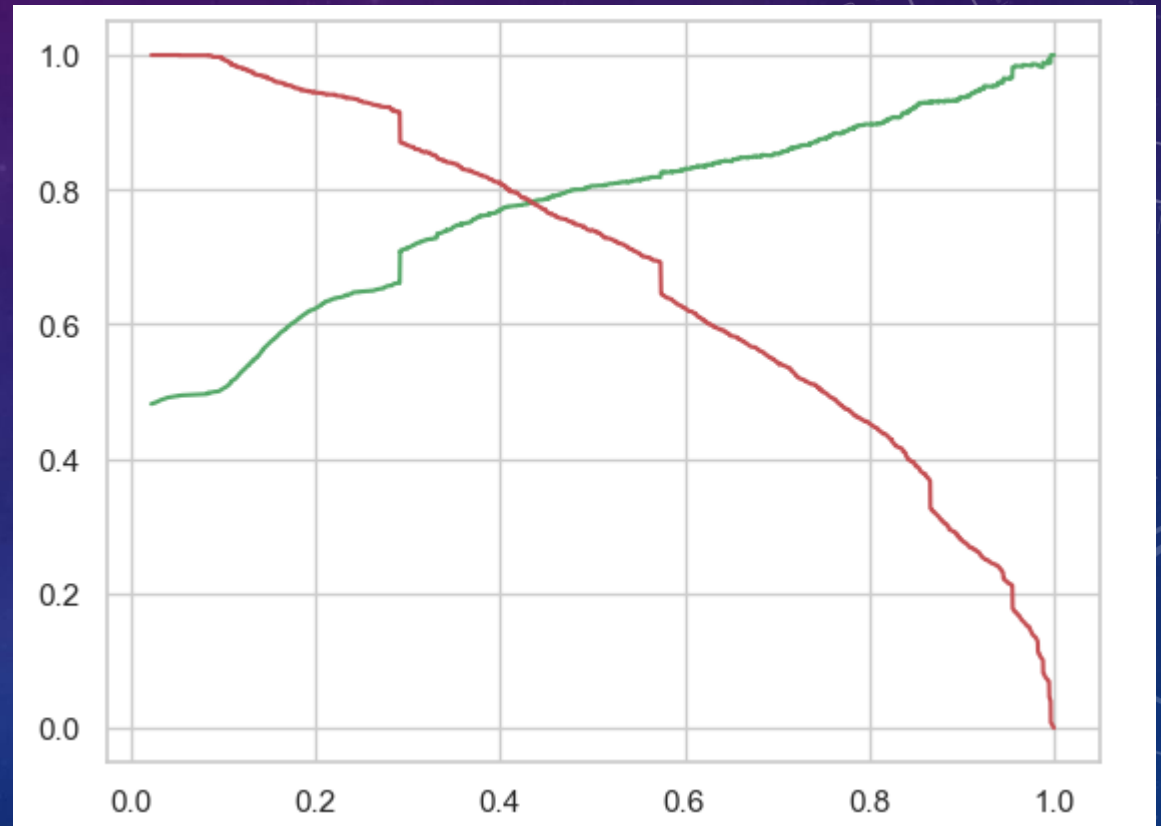
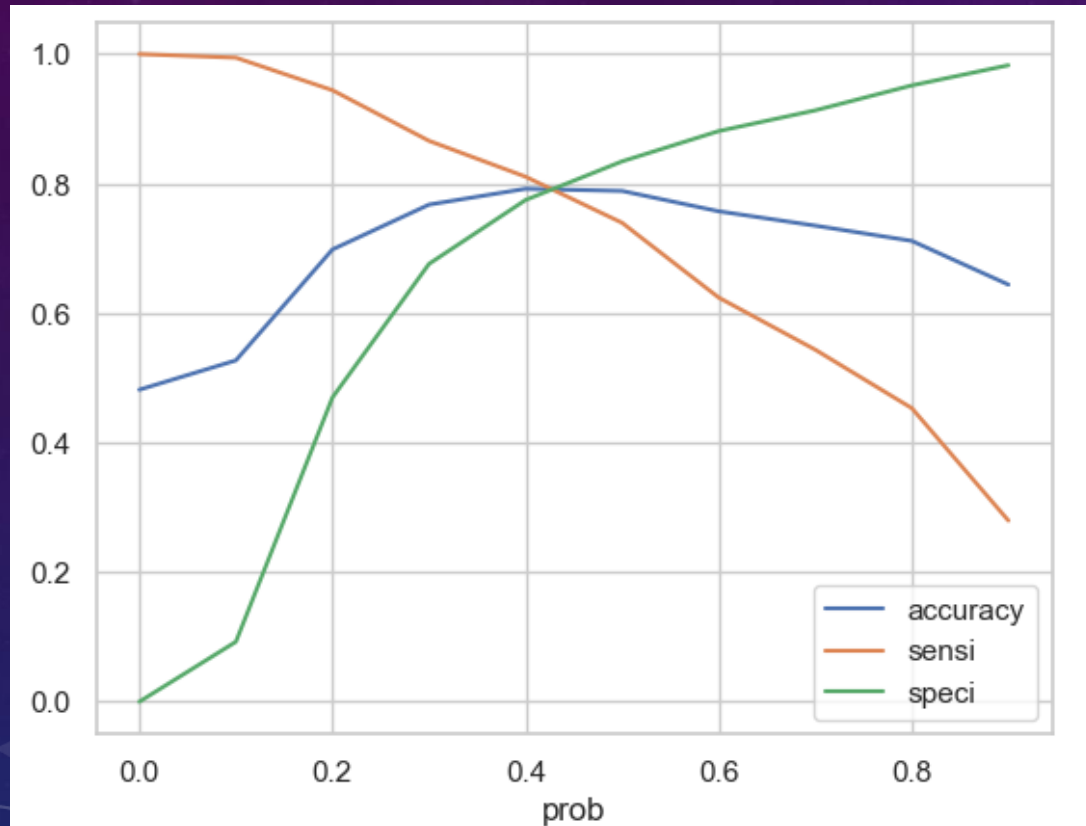
Specificity : 80%

CORRELATION



MODEL EVALUATION- ROC curve

0.42 is the tradeoff between precision and recal



CONCLUSION

- We see that the conversion rate is 30-35% (close to average) for API and Landing page submission. But very low for Lead Add form and Lead import. Therefore we can intervene that we need to focus more on the leads originated from API and Landing page submission.
- Most common last activity is email opened. highest rate = SMS Sent. Max are unemployed. Max conversion with working professional.
- We see max number of leads are generated by google / direct traffic. Max conversion ratio is by reference and welingak website.
- Leads who spent more time on website, more likely to convert.