

LEAD SCORING CASE STUDY



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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%.

There are a lot of leads generated in the initial stage (top) but only a few of them come out as paying customers from the bottom. In the middle stage, you need to nurture the potential leads well (i.e. Educating the leads about the product, constantly communicating etc.) In order to get a higher lead conversion.

X education has appointed you to help them select the most promising leads, i.e. The leads that are most likely to convert into paying customers. The company requires you 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%.

BUSSINESS GOALS

- The company requires a model to be built for selecting most promising leads.
- Lead scores given to each leads such that it indicates how promising the lead could be. The higher the lead score, the more promising the lead to get converted and the lower it is the lesser the chances of conversion.
- The model to be built in lead conversion rate around 80% or more.

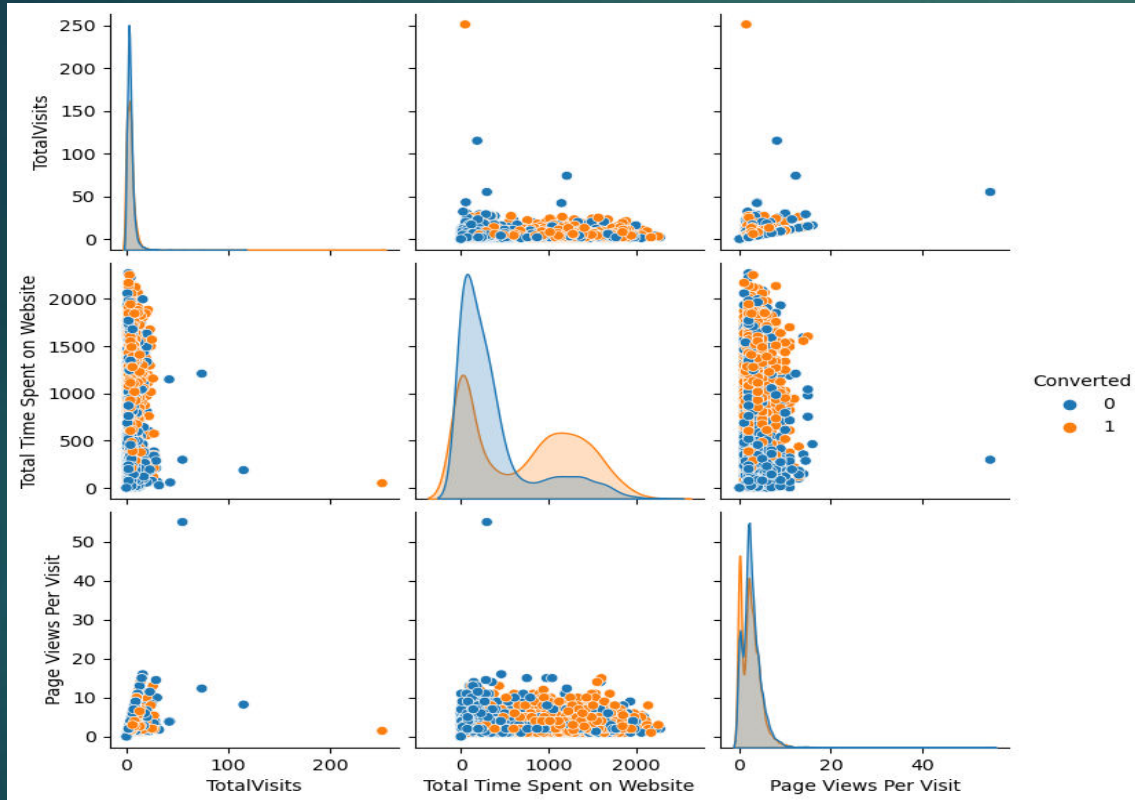
CASE STUDY GOALS

- To 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.
- To handle by adjusting into the company's future requirement.

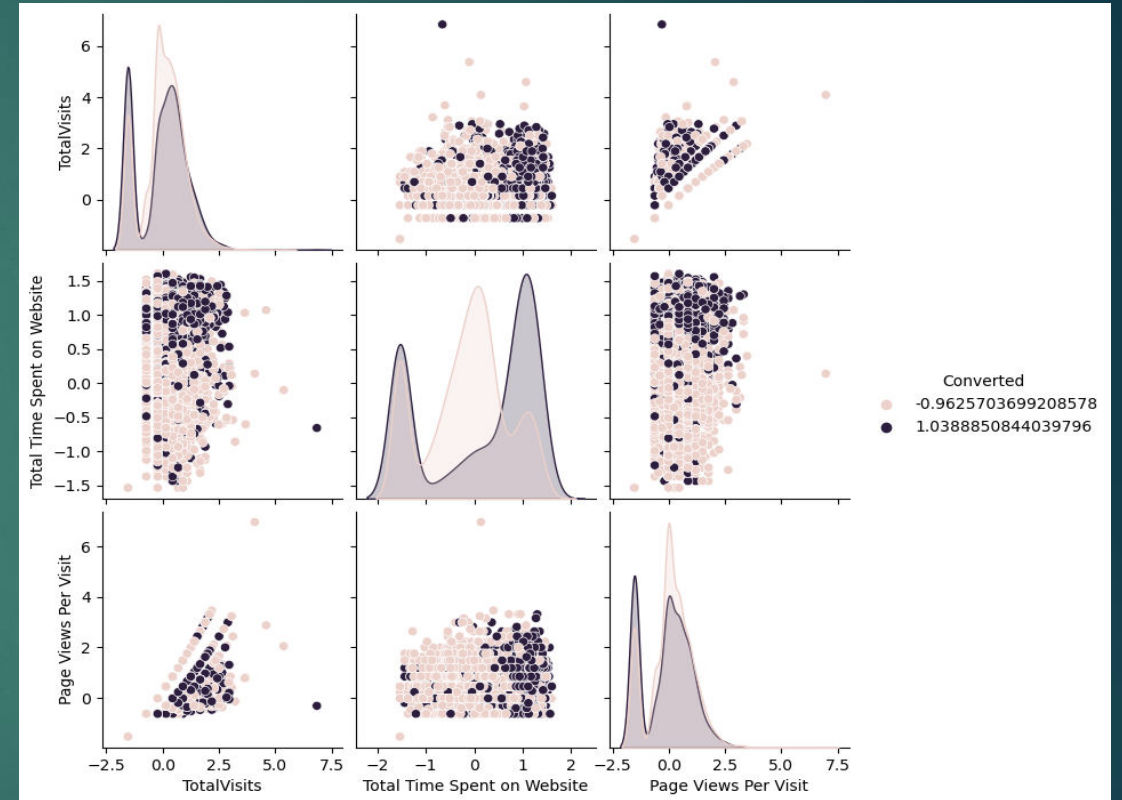
APPROACH

- Import the data
- Read & Understand the data
- Clean & Prepare the data
- Data Modelling
- Model Building
- Model Evaluation
- Making predictions on the test-set

DATA MODELLING (EDA)



Pair plot for conversion rate(educ)

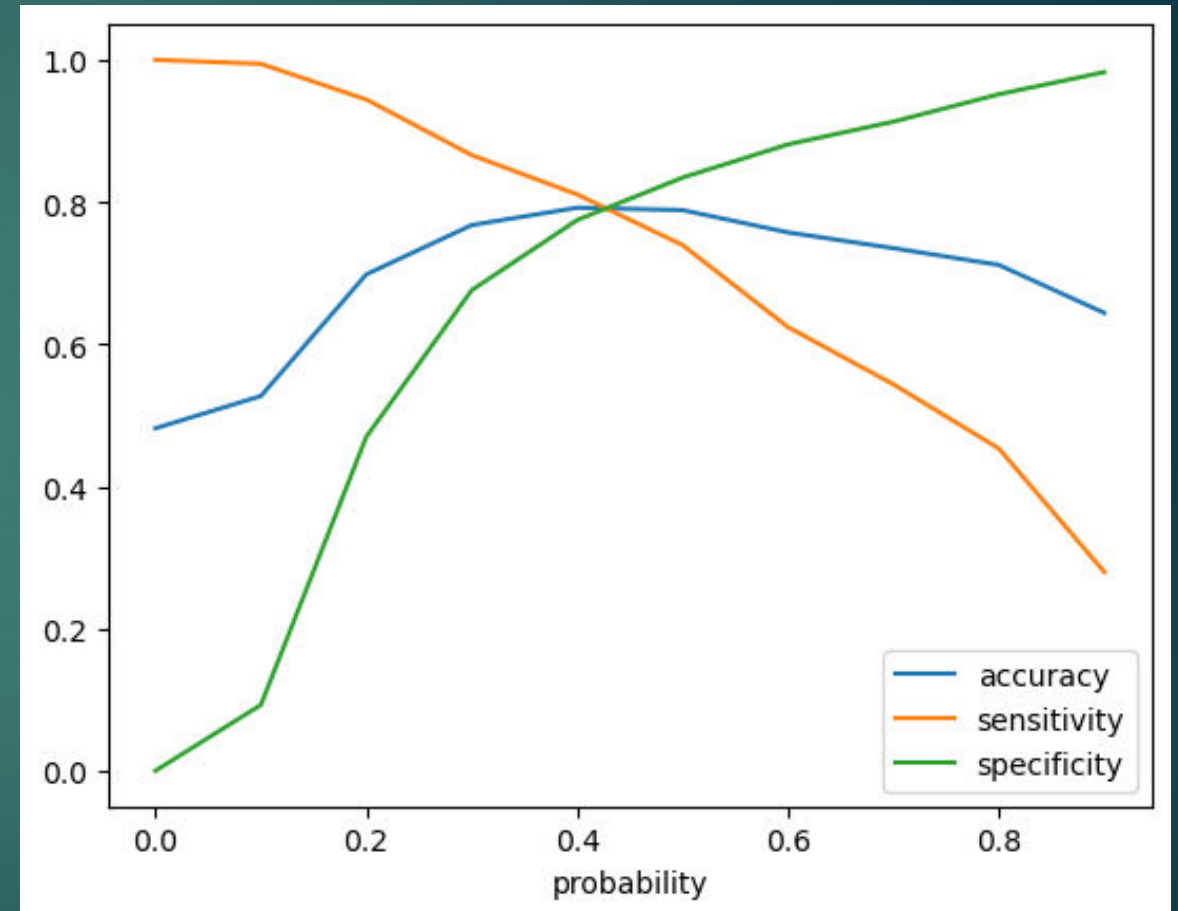
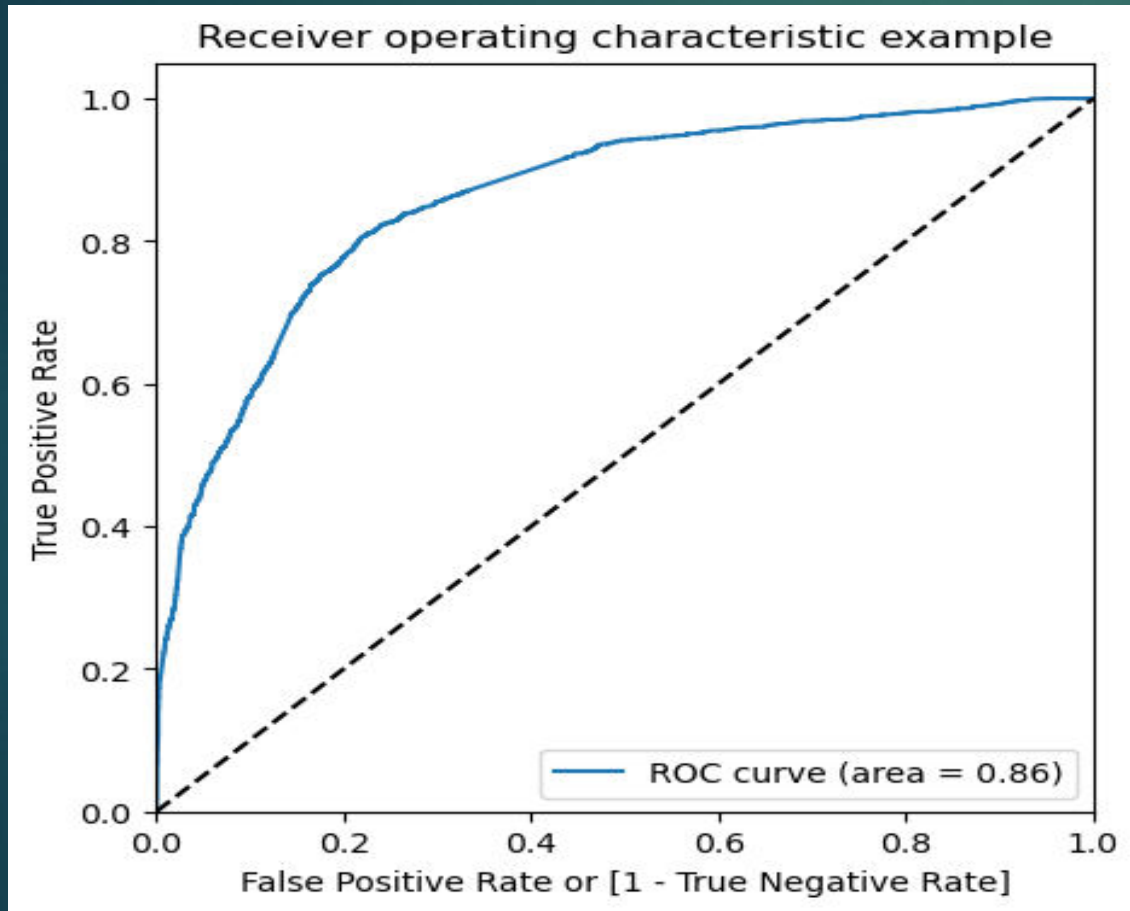


Pair plot for the value counts of conversion
rate(Transfomededuc)

MODEL BUILDING

- Splitting the data into training & test sets.
- The first basic steps for regression is performing a test train split, we have chosen 70-30 ratio.
- Use RFE for feature selection.
- Running RFE with **15** variables as output.
- Building the model by removing the variables whose p-value is greater than **0.05** & VIF value is greater than **5**.
- Prediction on the test data set.
- Overall accuracy was found to be around **79%**.
- Finding the optimal cut-off point.
- Optimal cut-off probability where we get balanced sensitivity & specificity.
- From the second graph (in the next slide-right) , the optimal cut-off is approximately to be at **0.42**.

ROC CURVE



CONCLUSION

- It was found out that the variables that mattered the most in the potential buyers are **TotalVisits, Total Time Spent on Website, Page Views Per Visit**.
- The list of leads should be kept handy so that you can inform them about new courses, services, job offers and future higher studies.
- Monitor each lead carefully so that you can tailor the information you send to them.
- Carefully provide job offerings, information or courses that suits best according to the interest of the leads & a proper plan to chart the needs of each lead will go a long way to capture the leads as prospects.
- Focus on converted leads & hold Q/A sessions with leads to extract the right information you need about them.
- Make further inquiries and appointments with the leads to determine their intention and mentality to join online courses.