This Case study aims to create a model for an education company named X Education who sells online courses to industry professionals. Company needs a model **where a lead score can be assigned 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**.

Approach:

Reading and Understanding the Data - Reading and understanding all the features was the first step for the precise data cleaning before model building.

Data Cleaning – As indicated by the business SELECT category was handled by replacing them with null and then further data cleaning/imputation was done along with other features considering threshold of 40%.

Exploratory Data Analysis – We used Data visualization to see how features vary with respect to Converted column. Also, identified different patterns in the data.

Data Preparation – Created dummy variables the categorical columns with more than 2 categories using the pd.get_dummies function and performed a 70-30 ratio spilt on dataset to create Train and Test set respectively.
Also, performed feature scaling using the standard scaler so that features can be evaluated on same scale.

Model Building – Shortlisted the top 15 features using the Recursive Feature Elimination (RFE) technique to build our first model.

Model Evaluation: Calculated the metrics sensitivity, specificity, precision, and accuracy.
To make predictions on the train dataset, optimum cut-off of 0.38. Our model's sensitivity is approx 79% which is only 1% less than the expected outcome, so we can say our model performed really well and met the expectation.

Summary:

While creating model There were a lots of leads generated in the initial stage (top) but only a few of them come out as paying customers. In order to get a higher lead conversion we have sort out the best prospects from the leads generated.

Leads whose current status was tagged as Closed by Horizzon, Lost to EINS and Will revert after reading the email were the most who converted into paying customers.

Apart from these we also observed few other features 'TotalVisits' , 'Total Time Spent on Website', and who came from references , which contribute most towards the probability of a lead getting converted.

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 question-answer 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.