Machine Learning Project

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SHARK TANK SIMULATION USING ML

Our Machine Learning model works on predicting each Sharks' reaction (whether they want to invest) to an entrepreneur coming from a particular domain. Another feature of our model is to estimate the equity and funds proposed by the Sharks in case they want to counter the entrepreneur's offer.

HOW DID WE ACQUIRE THE DATASET?

we have collected data manually by watching

shark Tank episodes of season 1.

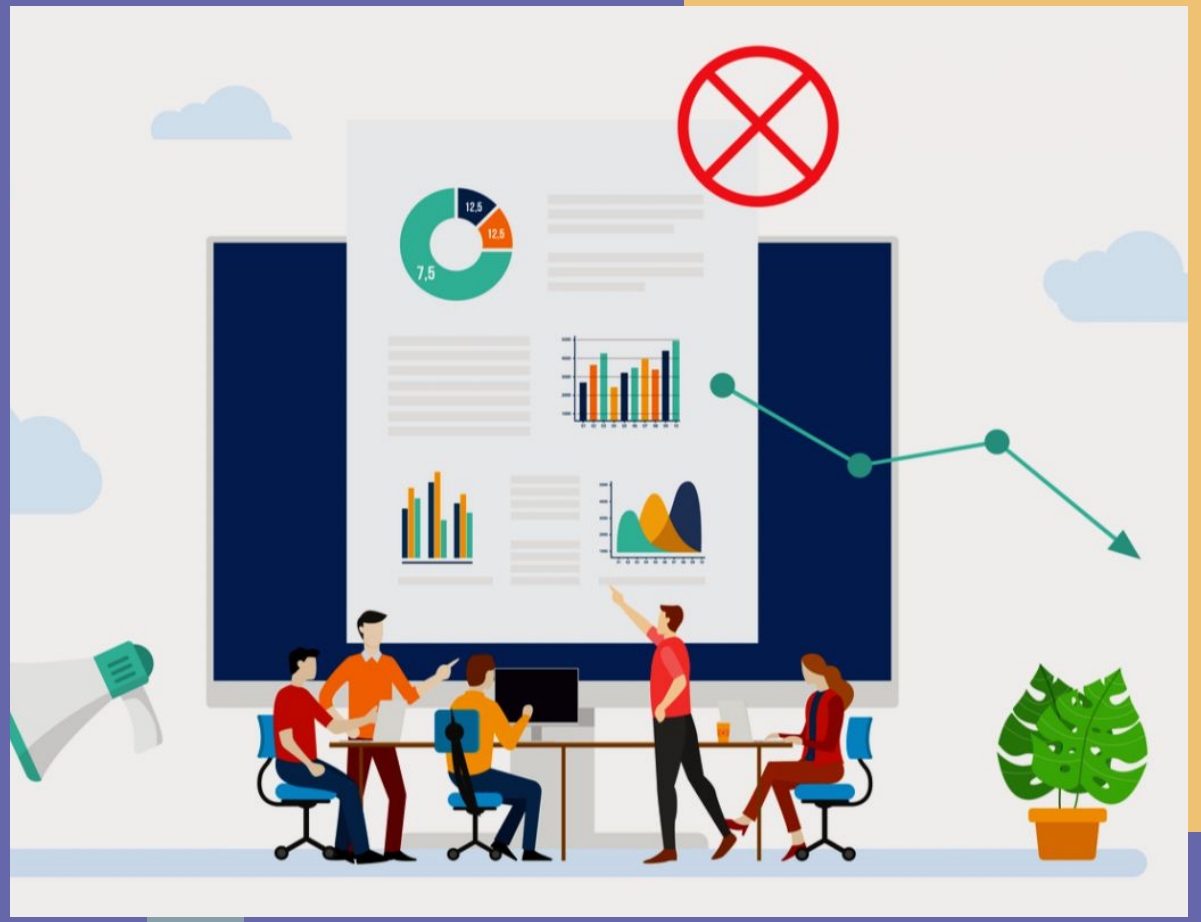
Apart from it we have referred shark tank episodes

which were held across other countries.

we have gathered our data in form of excel sheet.

DOES OUR DATASET HAVE MISSING/NOISY DATA? HOW DO WE HANDLE IT?

For certain episodes , Their were cases when client company didn’t provide gross margin and yearly revenue details. In such cases we preferred some references related to sales from web.



HOW DID WE ADDRESSED CLASS IMBALANCE?

unlike spam classification (which requires both positive and negative instance to be present in similar ratio.), while watching episodes we have noticed that there is unequal ration between IN/OUT behaviour of shark. Their exist class imbalance to a certain limit but not biased towards single label(IN or OUT)

RESULT AND FINDINGS

In phase 1 we have Decision Tree bcoz we had certain categorical columns which needed to be considered and that wouldn't had been possible with logistic regression. On an average Test Accuracy lied between 65-72 %.

In Phase 2 , we used Linear Regression and Decision Tree Regressor. The Mean absolute error of decision Tree was less than Linear Regression