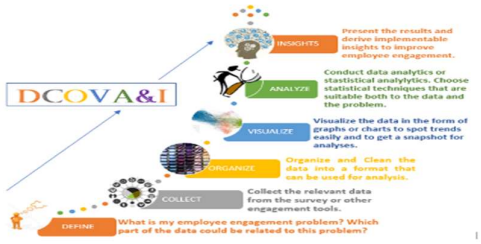
Analytics Case Study

Case Study 11 – How a manager used Analytics to Strengthen Fraud Detection Strategy during Credit Card Approval process.

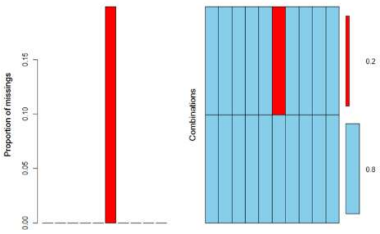
Industry – Banking and Financial Services

We follow DCOVA and I methodology to solve the problem. To Understand this methodology, check this whitepaper - https://pexitics.com/download/dcova-i-whitepaper/?wpdmdl=2970



Business Problem – The manager has historical data of its customers who are using or used the banks credit card. The data has customers demography information along with a flag stating if the customer was a fraud customer or not. Using this historical data she wishes to identify if the new applicant for the credit card would fall under fraud category or not so as to improve the credit card approval process and add more checks for applicants falling under the fraud category.

The manager approaches the analytics team with the problem and shares the data which has details. The analytics team gets the data and then **explores** the data to **treat the data for missing values and outliers.** The team comes out with visualization. One of the visualization is shown below -



This chart plots all the variables indicating if the variable has missing values or not in the data.

The analytics team then does **statistical analysis to** predict the "Fraud" customers based on the historical data. The team uses different algorithm for Classification to predict the fraud customers and based on different parameters comes out with the best classification method to be used. Using this, the manager would know if a new applicant falls under the fraud category so that more checking can be done on the applicant before taking any decision on the credit card application.

Author: Jay Kumar