**Banking & Financial Services – Credit Risk Modeling**

An MNC client interested in its credit risks as there is were chances of the borrowers not being able to repay the loan. Many factors in credit risk that makes it a complex task for the banks.

We were able to generate insight for the client by analysing the default rate and develop strategies to reinforce their lending schemes. With the help of Data Science, we were able to analyse and classify defaulters before sanctioning loan in a high-risk scenario by building Decision Tree CHART model.

It’s a kind of a classification technique where we actually create a Tree. There exists multiple kind of decision trees like CART, C4.5 and CHAID and each one uses their own internal method for calculation of important features or on which feature split should happen.

So basically I have worked on CART so I will explain that and apart from that C4.5 and CHAID also similar into working apart from their feature calculating mechanism.

CHART stands for Classification and Regression Tree and it uses ‘Gini Gains’ methodology. So, Gini Gains is based on 0 and 1 target variable. So on the basis of Target variable for each feature Gini Gain calculation will happen and that’s how it decides nodes for first split.

And after deciding the first split again same Gini Gain calculation will happen that is why these algorithms are called as Recursive Partitioning Algorithms. Then it will create Decision Tree.