**Project:**

Ensemble Learning:

Taking multiple Machine learning algorithms and placing them together and making them a one bigger ML algorithm,

The final one is leveraging many different algorithms

Instead of running decision tree once, I have run it multiple times to attain a larger ML model and leverage it

Step 1:

Pick up random K data points from the training set

Step 2:

Build a decision tree associated to those K data points

Step 3:

Choose the N tree of trees I want to build and repeat steps 1 and 2

Step 4:

For a new data point, I made each of the N tree trees predict the category to which the data points belong, and assigned the new data point to the category that wins the majority vote

DATASET:

**Dataset:** 400 customers of a car manufacturing company

With age and salary, we predict the purchased (as dependent variable)

**Dataset:**

In this I have used a dataset of social network ads

Here I have been working as data scientist of car company

Company has launched a brand-new car

I need to train the model using logistic regression of classification to predict which of Company’s previous customers will buy a brand-new irresistible car launched by the company

Now, as a data scientist, I train a classification model to predict which customer buys it

**Data given to me:**

Customers age

Customers estimated salary

Purchased variable: this tells if customer have brought older SUV of the car company

We have 0’s and 1’s saying if customer has brought these SUV’s or not

1. : customer did not buy
2. : customer did buy

Once I predict, advertising team will post on social networks and they will be targeted to customers whom we predict have potential to be a future customer to the same company by purchasing a brand-new SUV If given good deals

Decision tree classification:

Using decision tree, I am trying to find the accuracy and trying to compare the accurate amount of prediction I received using other models

**Final Exercise:**

To determine which of the customers will buy the brand-new SUV which is newly launched by the car company which they are using already, so that advertising team can target the advertisement on those target audience through social media