* **The data of details of cell nuclei taken from breast mass are given in cancer.csv and predict whether or not a patient has breast cancer using the Ensembling Techniques. Perform necessary exploratory data analysis before building the model and evaluate the model based on performance metrics other than model accuracy.**
* import pandas as pd
* import numpy as np
* import matplotlib.pyplot as plt
* import seaborn as sns
* import warnings
* warnings.filterwarnings("ignore")
* df = pd.read\_csv("cancer.csv")
* df
* df.info()
* df = df.dropna(how = "all", axis = 1)
* df
* df.info()
* df.isnull().sum()
* df.describe()
* sns.countplot(data = df, x = "diagnosis", palette = "dark")
* plt.show()
* df.value\_counts("diagnosis")
* plt.hist(df["radius\_mean"])
* plt.show()
* plt.hist(df["area\_mean"])
* plt.show()
* df.columns
* df = pd.DataFrame(df, columns = ['id', 'radius\_mean', 'texture\_mean','perimeter\_mean','area\_mean','smoothness\_mean', 'compactness\_mean', 'concavity\_mean', 'concave points\_mean', 'symmetry\_mean','fractal\_dimension\_mean','radius\_se','texture\_se', 'perimeter\_se', 'area\_se', 'smoothness\_se','compactness\_se', 'concavity\_se','concavepoints\_se','symmetry\_se','fractal\_dimension\_se','radius\_worst','texture\_worst','perimeter\_worst','area\_worst', 'smoothness\_worst','compactness\_worst', 'concavity\_worst', 'concavepoints\_worst','symmetry\_worst','fractal\_dimension\_worst', 'diagnosis'])
* df
* x = df.iloc[:,:-1]
* x
* y = df.iloc[:,-1]
* y
* from sklearn.model\_selection import train\_test\_split
* xtrain, xtest, ytrain, ytest = train\_test\_split(x,y, test\_size = 0.3, random\_state = 1)
* from sklearn.metrics import accuracy\_score, classification\_report
* from sklearn.ensemble import GradientBoostingClassifier
* gd = GradientBoostingClassifier()
* gd.fit(xtrain, ytrain)
* ypred = gd.predict(xtest)
* print(classification\_report(ytest, ypred))