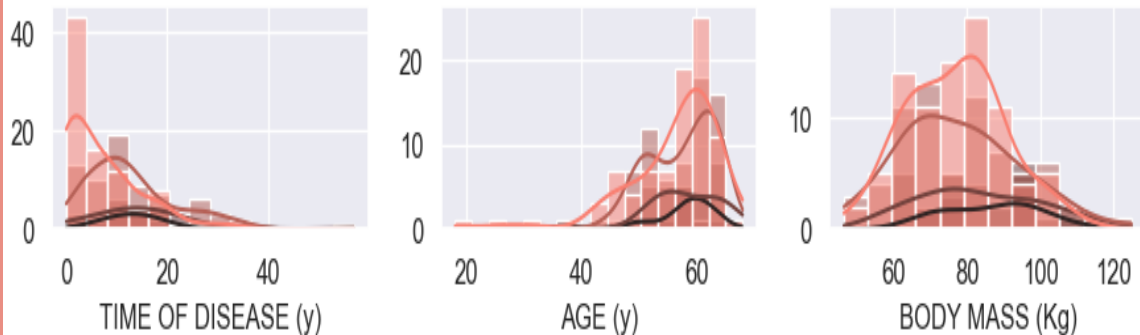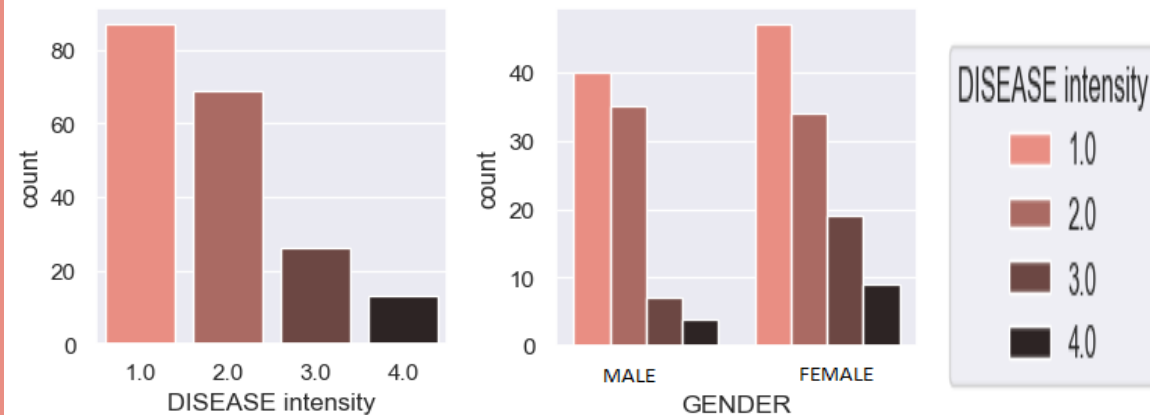# Diabetic's different grades and symptoms + Modeling by : Hirad Zakeri

	ID MCA	GENDER	TIME OF DISEASE (y)	AGE (y)	BODY MASS (Kg)	HEGHT (m)	Numbness	Burn	needl	Prick	rest	walk	ulcer	amput	Vibracao	tatil	DeformToes	Halux	Arch	CalusCrack	All Symptom	DISEASE intensity
0	1.0	2.0	17.0	61.0	80.5	1.760	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	2.0	4.0	1.0
1	2.0	2.0	11.0	65.0	70.5	1.616	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	2.0	5.0	0.0	1.0	1.0	0.0	13.0	3.0
2	3.0	2.0	25.0	54.0	48.2	1.490	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	1.0	10.0	2.0
3	4.0	2.0	25.0	55.0	83.5	1.755	0.0	1.0	0.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	7.0	2.0
4	5.0	2.0	13.0	64.0	47.1	1.535	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	2.0	7.0	2.0

Model	Accuracy	Balanced Accuracy	ROC AUC	F1 Score
BaggingClassifier	0.98	0.97	None	0.98
DecisionTreeClassifier	0.98	0.97	None	0.98
LGBMClassifier	0.94	0.91	None	0.94
RandomForestClassifier	0.89	0.83	None	0.88
ExtraTreesClassifier	0.86	0.83	None	0.86
LinearDiscriminantAnalysis	0.80	0.80	None	0.80
GaussianNB	0.81	0.75	None	0.80
NearestCentroid	0.73	0.73	None	0.74
AdaBoostClassifier	0.87	0.72	None	0.84
ExtraTreeClassifier	0.77	0.70	None	0.77
SVC	0.78	0.69	None	0.77
BernoulliNB	0.69	0.67	None	0.69
LogisticRegression	0.72	0.67	None	0.72

Confusion Matrix related to decision trees classifier