

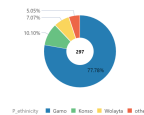
Final narration of results - General- Exploratory Analysis

General- Exploratory Analysis

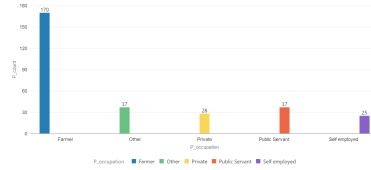
Patient count

297

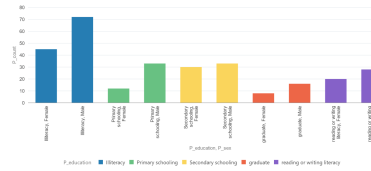
Patient count by ethnicity



Patient count by Patient occupation



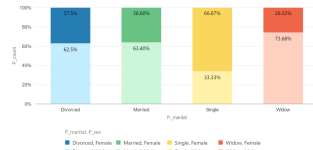
Patient count by Patient education, sex



Patient count by marital status



Patient count by Patient sex, marital status



Patient count by Admission type, Admission mode, distance

P_distance Group	A_type	A_mode	Cluster 1			Cluster 2			Cluster 3		
			P_count	P_percent	P_percent	P_count	P_percent	P_percent	P_count	P_percent	P_percent
a- Local	Repeated admission	Normal admission	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
		Emergency	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
	New admission	Normal admission	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
		Emergency	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
b- around entrance	Repeated admission	Normal admission	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
		Emergency	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
	New admission	Normal admission	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
		Emergency	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
c- within gate zone	Repeated admission	Normal admission	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
		Emergency	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
	New admission	Normal admission	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
		Emergency	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
d- from other zones	Repeated admission	Normal admission	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
		Emergency	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
	New admission	Normal admission	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
		Emergency	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%

A_type, A_mode

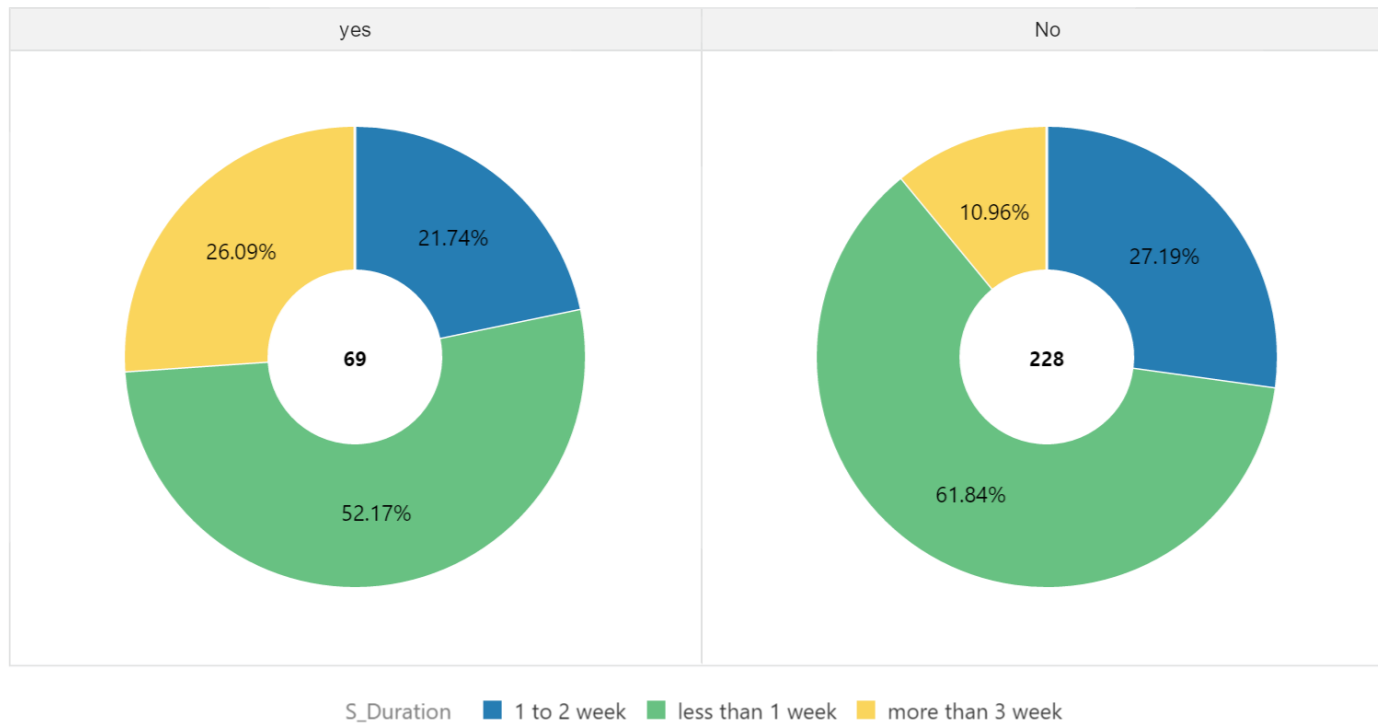
Patient count by Admission type, Admission mode, distance

P_distance Group	A_condition	A_mode	Cluster 1			Cluster 2			Cluster 3		
			P_count	P_percent	P_percent	P_count	P_percent	P_percent	P_count	P_percent	P_percent
a- Local	concrete	Normal admission	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
		Emergency	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
	unconcrete	Normal admission	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
		Emergency	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
b- around entrance	concrete	Normal admission	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
		Emergency	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
	unconcrete	Normal admission	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
		Emergency	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
c- within gate zone	concrete	Normal admission	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
		Emergency	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
	unconcrete	Normal admission	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
		Emergency	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
d- from other zones	concrete	Normal admission	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
		Emergency	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
	unconcrete	Normal admission	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%
		Emergency	10	3.37%	10.00%	10	3.37%	10.00%	10	3.37%	10.00%

A_condition, A_mode

Satisfaction level by gender and duration of stay

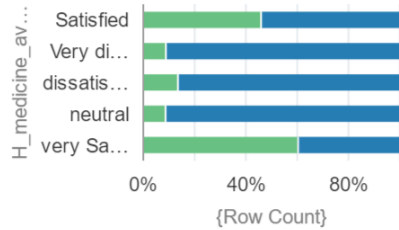
Patient count by Stay Duration, Satisfaction level



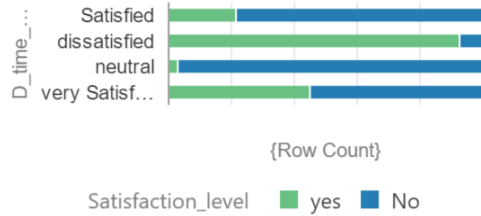
Final narration of results - Explain Satisfaction_level

Explain Satisfaction_level

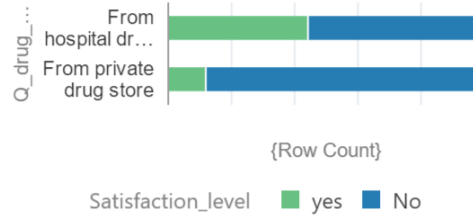
Satisfaction_level by H_medicine_av...



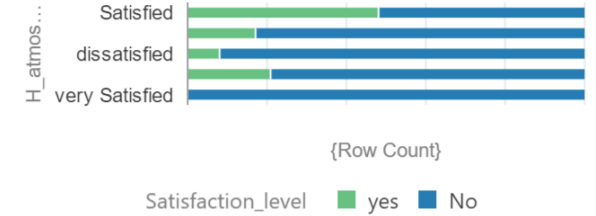
Satisfaction_level by D_time_spent_by_doct



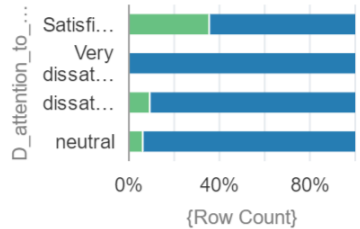
Satisfaction_level by Q_drug_purchase



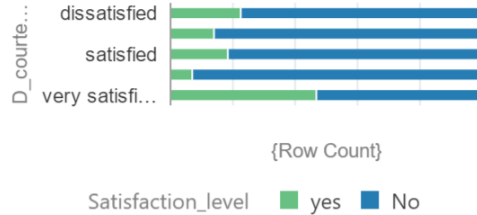
Satisfaction_level by H_atmosphre



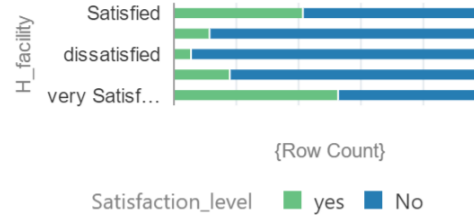
Satisfaction_level by D_attention



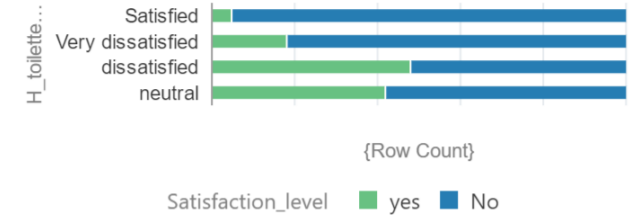
Satisfaction_level by D_courteousness



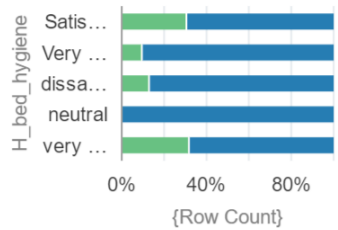
Satisfaction_level by H_facility



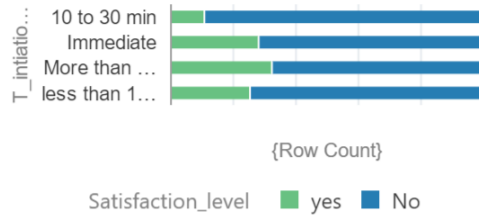
Satisfaction_level by H_toilette_hygiene



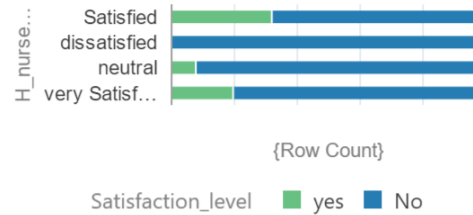
Satisfaction_level by H_bed_h



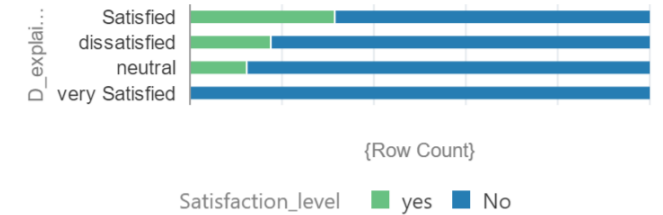
Satisfaction_level by T_initiation_time



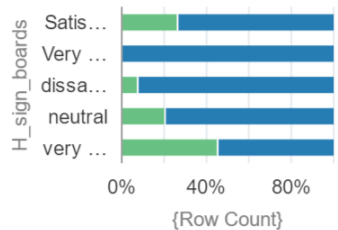
Satisfaction_level by H_nurse_courteousnes



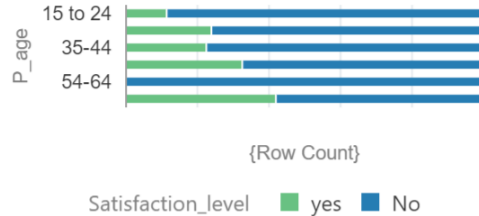
Satisfaction_level by D_explains_medically



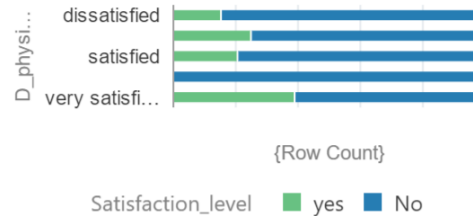
Satisfaction_level by H_sign_b



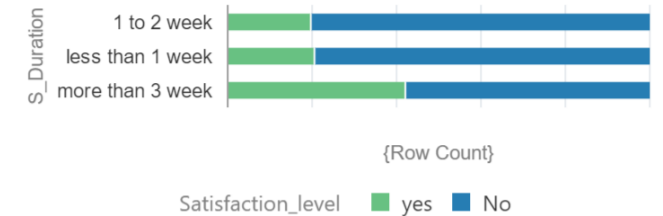
Satisfaction_level by P_age



Satisfaction_level by D_physician_availability

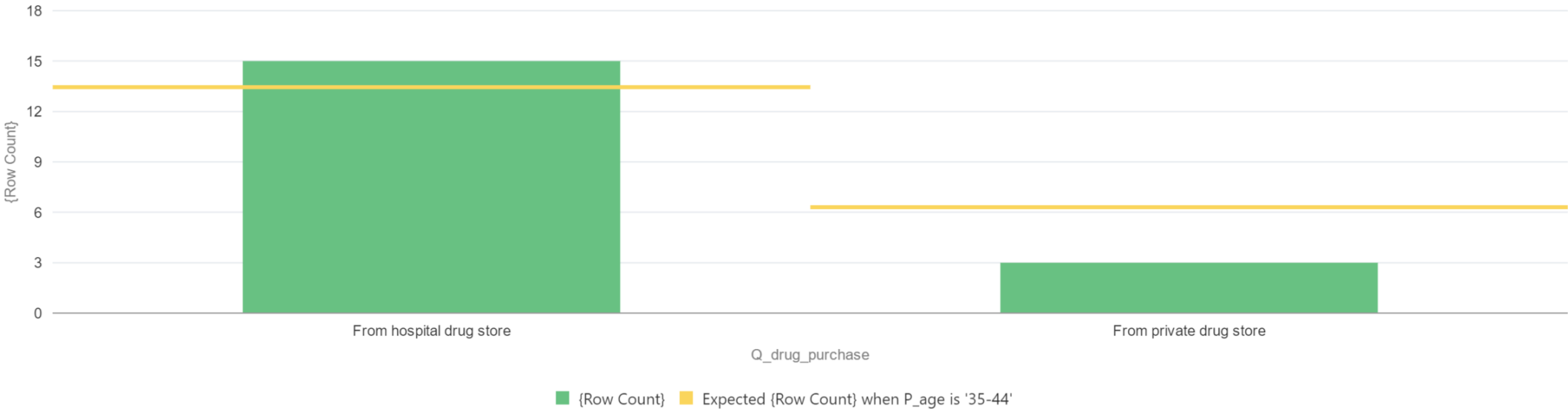


Satisfaction_level by S_Duration

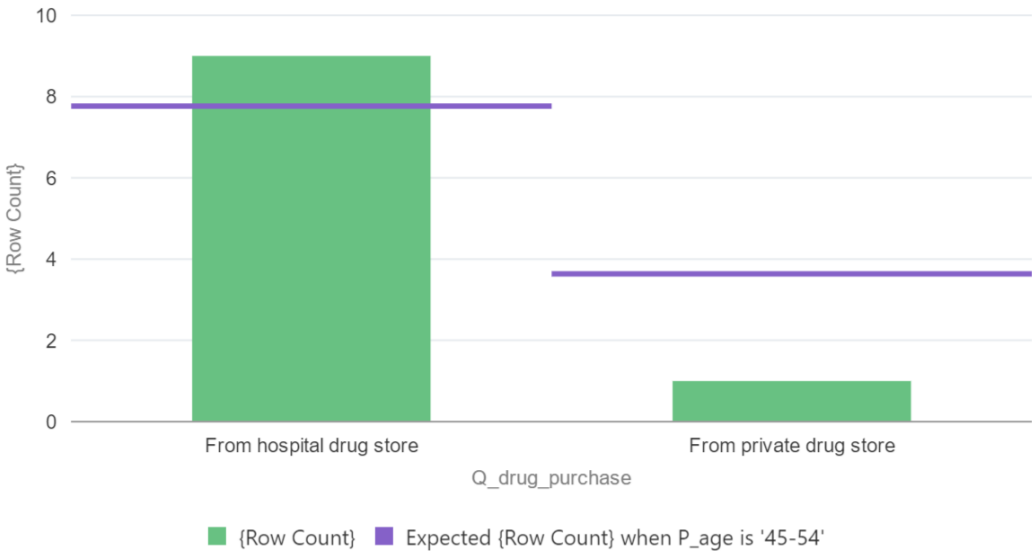


Anomalies in Satisfaction level

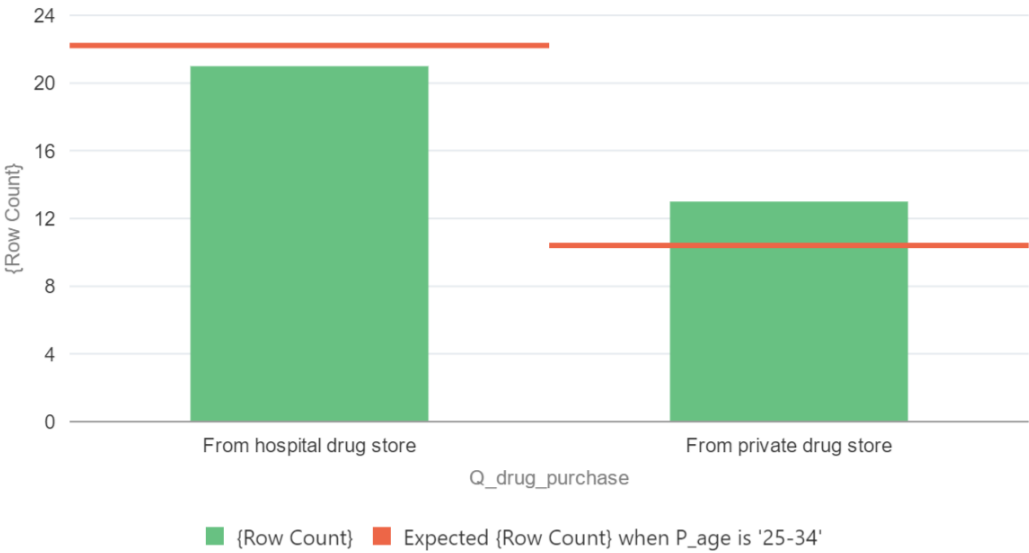
Satisfaction_level: yes, P_age: 35-44



Satisfaction_level: yes, P_age: 45-54




Satisfaction_level: yes, P_age: 25-34



Performance Evaluation of ML models

Logistic Regression

		Predicted Values		
Actual Values		yes	No	Total
	yes	8	3	11 (18%)
	No	1	48	49 (82%)
	Total	9 (15%)	51 (85%)	60 (100%)

Correct Prediction 0  100%

Incorrect Prediction 0  100%

F1 Value 0.80

Model Accuracy 93%

Precision 89%

Recall 73%

False Positive Rate 2%

Neural Network

		Predicted Values	
Actual Values		yes	No
	yes	8	3
	No	4	45
	Total	12 (20%)	48 (80%)


F1 Value 0.70

Model Accuracy 88%

Precision 67%

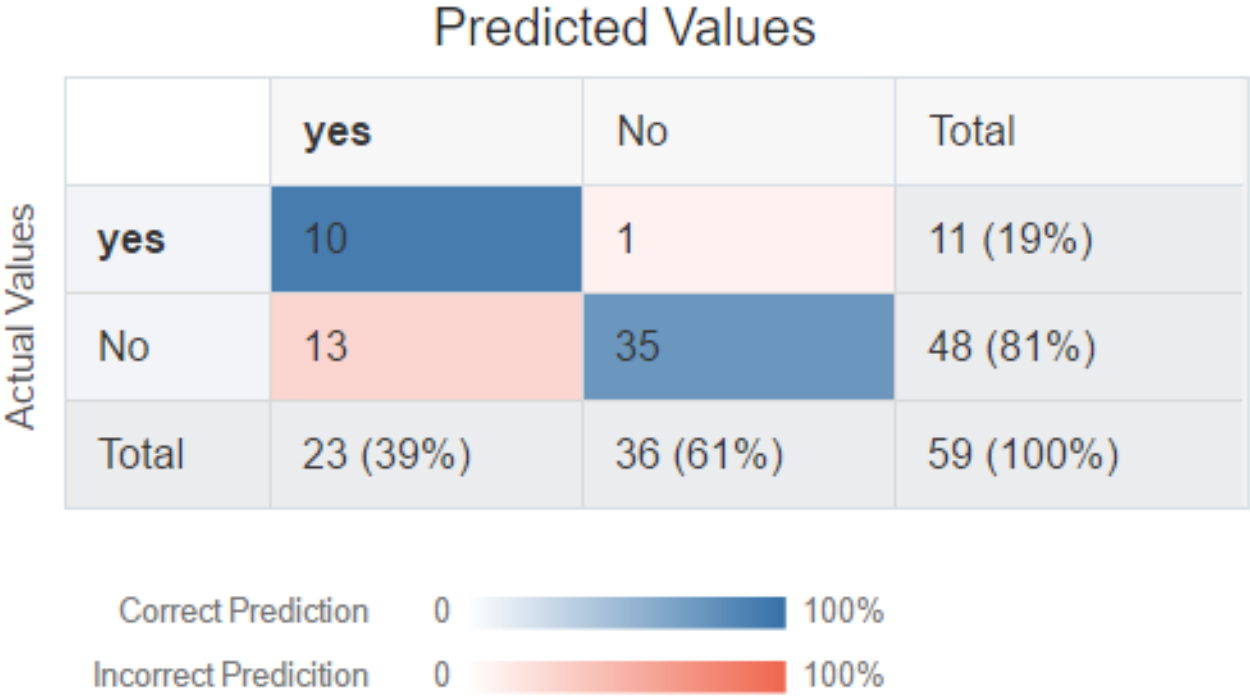
Recall 73%

False Positive Rate 8%

Correct Prediction 0  100%

Incorrect Prediction 0  100%

Random forest



F1 Value 0.59

Model Accuracy 76%

Precision 43%

Recall 91%

False Positive Rate 27%