BEFORE TUNING

```
dtModel = create_model('dt')
```

Fold	Accuracy	AUC	Recall	Prec.	F1	Kappa	MCC
0	0.7037	0.6752	0.5789	0.5789	0.5789	0.3504	0.3504
1	0.7407	0.7038	0.5789	0.6471	0.6111	0.4176	0.4190
2	0.7037	0.6511	0.4737	0.6000	0.5294	0.3175	0.3223
3	0.6111	0.5797	0.4737	0.4500	0.4615	0.1575	0.1576
4	0.6667	0.6586	0.6316	0.5217	0.5714	0.3027	0.3064
5	0.7222	0.6895	0.5789	0.6111	0.5946	0.3836	0.3839
6	0.7778	0.7564	0.6842	0.6842	0.6842	0.5128	0.5128
7	0.7170	0.7183	0.7222	0.5652	0.6341	0.4089	0.4171
8	0.6415	0.6206	0.5556	0.4762	0.5128	0.2319	0.2336
9	0.7736	0.7071	0.5000	0.7500	0.6000	0.4508	0.4688
Mean	0.7058	0.6760	0.5778	0.5884	0.5778	0.3534	0.3572
Std	0.0510	0.0484	0.0796	0.0873	0.0604	0.1000	0.1018

Get the "parameters" of Decision Tree

```
plot_model(dtModel, plot='parameter')
```

	Parameters
ccp_alpha	0.0
class_weight	None
criterion	gini
max_depth	None
max_features	None
max_leaf_nodes	None
min_impurity_decrease	0.0
min_samples_leaf	1
min_samples_split	2
min_weight_fraction_leaf	0.0
random_state	7642
splitter	best

AFTER TUNING

```
dtModelTuned = tune_model(dtModel, n_iter=50)
```

Fold	Accuracy	AUC	Recall	Prec.	F1	Kappa	MCC
0	0.8148	0.8301	0.6316	0.8000	0.7059	0.5735	0.5820
1	0.7407	0.7474	0.6316	0.6316	0.6316	0.4316	0.4316
2	0.8148	0.8195	0.5789	0.8462	0.6875	0.5624	0.5828
3	0.7407	0.7165	0.5263	0.6667	0.5882	0.4028	0.4088
4	0.7407	0.7060	0.4737	0.6923	0.5625	0.3874	0.4014
5	0.8519	0.8714	0.6316	0.9231	0.7500	0.6499	0.6736
6	0.7593	0.7361	0.5789	0.6875	0.6286	0.4524	0.4561
7	0.7170	0.7325	0.5000	0.6000	0.5455	0.3424	0.3454
8	0.8302	0.8508	0.7222	0.7647	0.7429	0.6163	0.6168
9	0.8491	0.8532	0.5556	1.0000	0.7143	0.6228	0.6725
Mean	0.7859	0.7864	0.5830	0.7612	0.6557	0.5041	0.5171
Std	0.0485	0.0609	0.0702	0.1240	0.0708	0.1068	0.1152

```
Fitting 10 folds for each of 50 candidates, totalling 500 fits
```

Get the "tuned parameters" of Decision Tree

```
plot_model(dtModelTuned, plot='parameter')
```

	Parameters
ccp_alpha	0.0
class_weight	None
criterion	gini
max_depth	3
max_features	log2
max_leaf_nodes	None
min_impurity_decrease	0.05
min_samples_leaf	5
min_samples_split	5
min_weight_fraction_leaf	0.0
random_state	7642
splitter	best