R2 Value All Algothirem And Parameter

1.Linear Regression:

S.NO	fit_intercept	copy_X	n_jobs	positive	Result
1	True	True	None	False	0.7100923694262509
2	False	True	None	False	0.606198857501594
3	True	True	None	True	0.7100836758264428
4	True	False	None	False	0.7100923694262509
5	True	True	-1	False	0.7100923694262509
6	True	False	-1	False	0.7100923694262509
7	False	True	None	True	0.6034662291906432
8	True	True	-1	True	0.7100836758264428
9	True	False	None	True	0.7100836758264428
10	False	False	-1	True	0.6034662291906432

2.Support Vector Regression:

S.NO	Support Vector Regression Parameter	Result
1	SVR(kernel='rbf', degree=3, gamma='scale', coef0=0.0, tol=0.001, C=1.0, epsilon=0.1, shrinking=True, cache_size=200, verbose=False, max_iter=-1)	-54117.28769532082
2	SVR(kernel='linear', C=1.0, epsilon=0.1)	-11.396253583524821
3	SVR(kernel='poly', degree=5, coef0=1.0, C=10, epsilon=0.2)	0.6609483617376657
4	SVR(kernel='rbf', gamma=0.1, C=100, epsilon=0.05)	-157.2924901801108
5	SVR(kernel='rbf', gamma='scale', C=0.1, epsilon=0.5)	-3420472.0893289694
6	SVR(kernel='rbf', shrinking=False, cache_size=100, max_iter=1000)	-34167.66325814844
7	SVR(kernel='rbf', gamma='scale', C=1.0, epsilon=0.01)	-34167.66325814844
8	SVR(kernel='rbf', gamma='scale', C=1000, epsilon=0.1)	-11.607912151408682
9	SVR(kernel='rbf', tol=0.01, C=1.0, epsilon=0.1)	-34167.66325814844
10	SVR(kernel='rbf', gamma='scale', C=1.0, cache_size=500)	-34167.66325814844

3.Decision Tree Regressor:

S.NO	Decision Tree Regression Parameter	Result
1	DecisionTreeRegressor()	0.7299786318328831
2	DecisionTreeRegressor(max_depth=5)	0.8451918782856946
3	DecisionTreeRegressor(min_samples_split=10)	0.7949799551628338
4	DecisionTreeRegressor(min_samples_leaf=5)	0.856832741003229
5	DecisionTreeRegressor(min_impurity_decrease=0.01)	0.7451200531765064
6	DecisionTreeRegressor(splitter='random', random_state=42)	0.732563628918583
7	DecisionTreeRegressor(max_features='sqrt')	0.7418799163433996
8	DecisionTreeRegressor(max_leaf_nodes=20)	0.8451984515251683
9	DecisionTreeRegressor(ccp_alpha=0.01)	0.7360983960014815
10	DecisionTreeRegressor(max_depth=10,min_samples_split=5,min_samples_leaf=3,max_leaf_nodes=50,random_state=42)	0.8449607353723634
11	DecisionTreeRegressor(max_features='log2', max_depth=7, random_state=42)	0.8337496804496126
12	DecisionTreeRegressor(splitter='random', min_impurity_decrease=0.02, random_state=0)	0.7643232928309436

4.Random Forest:

S.NO	**Random Forest** Regression Parameter	Result
1	RandomForestRegressor()	0.8454983529210367
2	RandomForestRegressor(n_estimators=200, random_state=42)	0.8502835548739156
3	RandomForestRegressor(max_depth=10, random_state=42)	0.8541256793474461
4	RandomForestRegressor(min_samples_split=10, random_state=42)	0.8661717453598979
5	RandomForestRegressor(min_samples_leaf=5, random_state=42)	0.8764837105860754
6	RandomForestRegressor(max_features='sqrt', random_state=42)	0.8538860595247719
7	RandomForestRegressor(bootstrap=True, random_state=42)	0.8484369468168531
8	RandomForestRegressor(oob_score=True, random_state=42)	0.8484369468168531
9	RandomForestRegressor(n_jobs=-1, random_state=42)	0.8484369468168531
10	RandomForestRegressor(warm_start=True, random_state=42)	0.8484369468168531
11	RandomForestRegressor(ccp_alpha=0.01, random_state=42)	0.8484370790666915
12	RandomForestRegressor(max_samples=0.8, random_state=42)	0.8562361164371184

13	RandomForestRegressor(max_depth=None, min_samples_split=2, min_samples_leaf=1, n_estimators=500, random_state=42)	0.8495089313096014
14	RandomForestRegressor(n_estimators=50, max_depth=5, min_samples_split=5, min_samples_leaf=3, random_state=42)	0.8815787856418197
15	RandomForestRegressor(n_estimators=100, max_depth=10, n_jobs=-1, max_samples=0.9, random_state=42)	0.8557744371806036

FINAL OUTPUT RANDOM FOREST RESULT:

14	RandomForestRegressor(n_estimators=50, max_depth=5, min_samples_split=5, min_samples_leaf=3, random_state=42)	0.8815787856418197