3 step AI Model

Machine Learning

Supervised Learning

Regression

MLR

R2_score – 0.7894

SVR

kernel	gamma	C	R2
rbf	scale	1	-0.0884
rbf	scale	1000	-0.1174
rbf	auto	1	-0.0894
rbf	auto	1000	-0.0407
poly	scale	1	-0.0642
poly	scale	1000	-0.0555
poly	auto	1	0.8654
poly	auto	1000	-17.9826
sigmoid	scale	1	-0.0899
sigmoid	scale	1000	-1.6659
sigmoid	auto	1	-0.0897
sigmoid	auto	1000	-0.0897

Decision Tree

criterion	splitter	R2
squared_error	best	0.6916
squared_error	random	0.7279
friedman_mse	best	0.6896
friedman_mse	random	0.7703
absolute_error	best	0.6808
absolute_error	random	0.7023
poisson	best	0.7290
poisson	random	0.6639

RF

n_estimators	criterion	random_state	R2
50	squared_error	None	0.8498
100	squared_error	None	0.8538
1000	squared_error	None	0.8541
50	friedman_mse	None	0.8500
100	friedman_mse	None	0.8540
1000	friedman_mse	None	0.8537
50	absolute_error	None	0.8526
100	absolute_error	None	0.8520
1000	absolute_error	None	0.8537
50	poisson	None	0.8491
100	poisson	None	0.8526
1000	poisson	None	0.8548

FINAL EFFICIENT MODEL

SVR –> kernel=poly, gamma=auto, C=1 with R2 score=0.8654