Regression Assignment Evaluation Matrics on
Multiple Linear Regression | Support Vector Machine | Decision Tree | Random Forest

Multiple Linear Regression

fit_intercept	copy_X	n_jobs	positive	R2 score
True	True	None	False	0.781
False	True	None	False	-0.3013
True	True	-1	False	0.781
True	True	None	False	0.781

Support Vector Machine Regression Problem

kernel	C	epsilon	gamma	xxx	xxx	R2 score
rbf	1.0	0.1	scale	xxx	xxx	-85031298.9455
rbf	0.1	0.1	scale	xxx	xxx	-85031298.9455
rbf	10.0	0.01	scale	xxx	xxx	-85221683.8562
rbf	1.0	0.01	scale	xxx	xxx	-82564963.5655
rbf	1.0	0.5	scale	xxx	xxx	-85031298.9455
rbf	1.0	0.1	scale	xxx	xxx	-85031298.9455
rbf	1.0	0.1	auto	xxx	xxx	-85031298.9455
linear	C	1.0	0.1	xxx	xxx	-85100145.2597
kernel	degree	C	epsilon	coef0	xxx	
poly	2	1.0	0.1	1.0	xxx	-83262125.9485
poly	3	1.0	0.1	1.0	xxx	-84824878.6544
kernel	C	epsilon	gamma	coef0	xxx	-8596521.3
sigmoid	1.0	0.1	scale	0	xxx	-84958796.96
kernel	C	epsilon	gamma	shrinking	cache_size	
rbf	1.0	0.1	scale	False	500	-85031298.95

Decision Tree

criterion	splitter	max_depth	min_samples_split	R2 score
# Default configuration				
squared_error	best	None	2	0.8288
# Different criterion				
criterion	splitter	max_depth	max_depth	
squared_error	best	xxx	5	0.8336
absolute_error	best	xxx	5	0.8598
friedman_mse	best	xxx	5	0.8336
poisson	best	xxx	5	0.8333
# Different max_depth values				
squared_error		3	xxx	0.8531
squared_error		7	xxx	0.7972
squared_error		10	xxx	0.7520
# Different splitter				
criterion	splitter	max_depth	random_state	
squared_error	random	5	42	0.8205
# min_samples_split variations				
criterion	splitter	max_depth	min_samples_split	
squared_error	xxx	5	5	0.8336
squared_error	xxx	5	20	0.8388
squared_error	xxx	5	0.1	0.8527
# min_samples_leaf variations				
criterion	splitter	max_depth	min_samples_leaf	
squared_error	xxx	5	5	0.8690
squared_error	xxx	5	10	0.8698
# max_features variations				
criterion	splitter	max_depth	max_features	
squared_error	xxx	5	1	0.8336
squared_error	xxx	5	sqrt	0.8467
# max_leaf_nodes				
criterion	splitter	max_depth	max_leaf_nodes	
squared_error	xxx	xxx	10	0.8525
squared_error	xxx	xxx	20	0.8288
squared_error	xxx	xxx	50	0.7989
# min_impurity_decrease				
criterion	splitter	max_depth	min_impurity_decrease	
squared_error	xxx	5	0.01	0.8336
squared_error	xxx	5	0.05	0.8336
# ccp_alpha (cost complexity pruning)				
criterion	splitter	max_depth	ccp_alpha	
squared_error	xxx	None	0.01	0.7119
squared_error	xxx	None	0.05	0.7078
# ccp_alpha (cost complexity pruning)				
criterion	splitter	max_depth	min_weight_fraction_leaf	
squared_error	xxx	5	0.05	0.8558

Random Forest

Test ID	n_estimators	criterion	max_depth	min_samples_split	min_samples_leaf	min_weight_fraction_leaf	max_features	max_leaf_nodes	min_impurity_decrease	bootstrap	oob_score	n_jobs	random_state	verbose	warm_start	ccp_alpha	max_samples	Test Purpose	Metrics scores r2 score
T001	100	squared_error	None	2	1	0	1	None	0	TRUE	FALSE	None	None	0	FALSE	0	None	fault/Baselii	0.8541
T002	50	squared_error	None	2	1	0	1	None	0	TRUE	FALSE	None	42	0	FALSE	0	None	r trees with	0.8565
T003	200	squared_error	None	2	1	0	1	None	0	TRUE	FALSE	None	42	0	FALSE	0	None	More trees	0.8589
T004	100	absolute_error	None	2	1	0	1	None	0	TRUE	FALSE	None	42	0	FALSE	0	None	ent criterion	0.8608
T005	100	friedman_mse	None	2	1	0	1	None	0	TRUE	FALSE	None	42	0	FALSE	0	None	nan MSE crit	0.8571
T006	100	poisson	None	2	1	0	1	None	0	TRUE	FALSE	None	42	0	FALSE	0	None	isson criteri	0.8595
T007	100	squared_error	5	2	1	0	1	None	0	TRUE	FALSE	None	42	0	FALSE	0	None	ited tree de	0.8713
T008	100	squared_error	10	2	1	0	1	None	0	TRUE	FALSE	None	42	0	FALSE	0	None	erate tree de	0.86
T009	100	squared_error	None	5	1	0	1	None	0	TRUE	FALSE	None	42	0	FALSE	0	None	min_sample	0.8618
T010	100	squared_error	None	10	1	0	1	None	0	TRUE	FALSE	None	42	0	FALSE	0	None	er min_sam	0.8656
T011	100	squared_error	None	2	5	0	1	None	0	TRUE	FALSE	None	42	0	FALSE	0	None	min_sample	0.8733
T012	100	squared_error	None	2	10	0	1	None	0	TRUE	FALSE	None	42	0	FALSE	0	None	er min_sam	0.8759
T013	100	squared_error	None	2	1	0.1	1	None	0	TRUE	FALSE	None	42	0	FALSE	0	None	eight fractio	0.8504
T014	100	squared_error	None	2	1	0	0.5	None	0	TRUE	FALSE	None	42	0	FALSE	0	None	ced max_fea	0.8638
T015	100	squared_error	None	2	1	0	0.3	None	0	TRUE	FALSE	None	42	0	FALSE	0	None	r max_featu	0.8484
T016	100	squared_error	None	2	1	0	1	50	0	TRUE	FALSE	None	42	0	FALSE	0	None	ited leaf no	0.8652
T017	100	squared_error	None	2	1	0	1	100	0	TRUE	FALSE	None	42	0	FALSE	0	None	ore leaf node	0.8606
T018	100	squared_error	None	2	1	0	1	None	0.01	TRUE	FALSE	None	42	0	FALSE	0	None	mpurity decr	0.8582
T019	100	squared_error	None	2	1	0	1	None	0	FALSE	FALSE	None	42	0	FALSE	0	None	No bootstrap	0.7142
T020	100	squared_error	None	2	1	0	1	None	0	TRUE	TRUE	None	42	0	FALSE	0	None	ith OOB sco	0.8576
T021	100	squared_error	None	2	1	0	1	None	0	TRUE	FALSE	-1	42	0	FALSE	0	None	rocessing (u	0.8576
T022	100	squared_error	None	2	1	0	1	None	0	TRUE	FALSE	4	42	0	FALSE	0	None	processing (	0.8576
T023	100	squared_error	None	2	1	0	1	None	0	TRUE	FALSE	None	42	1	FALSE	0	None	erbose outp	0.8576
T024	100	squared_error	None	2	1	0	1	None	0	TRUE	FALSE	None	42	0	TRUE	0	None	m start enat	0.8576
T025	100	squared_error	None	2	1	0	1	None	0	TRUE	FALSE	None	42	0	FALSE	0.01	None	ng with ccp_	0.8576
T026	100	squared_error	None	2	1	0	1	None	0	TRUE	FALSE	None	42	0	FALSE	0.05	None	gher prunin	0.8576
T027	100	squared_error	None	2	1	0	1	None	0	TRUE	FALSE	None	42	0	FALSE	0	0.8	ubsample 80	0.8595
T028	100	squared_error	None	2	1	0	1	None	0	TRUE	FALSE	None	42	0	FALSE	0	0.5	ubsample 50	0.8696
T029	50	absolute_error	8	5	3	0	0.7	None	0	TRUE	TRUE	-1	42	0	FALSE	0	0.7	ned regulariz	0.8753
T030	150	friedman_mse	15	10	5	0.05	0.5	75	0.01	TRUE	FALSE	4	42	0	FALSE	0.02	0.6	ned regulariz	0.7939