

Algorithm	Hyperparameter	Set of tested values
TF-IDF	max_features	[40, 140, 180, 220]
	ngram_range	[(1, 1), (1, 2), (2, 2)]
	min_df	[0.001, 0.01, 0.1]
	max_df	[0.5, 0.6, 0.7, 0.8, 0.9]
	stop_words	[None, 'english']
Logistic Regression	C	[0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1. ]
	solver	['newton-cg', 'sag', 'saga', 'lbfgs']
	class_weight	['balanced', None]
Random Forest	max_depth	[100]
	min_samples_split	[2, 5, 10]
	min_samples_leaf	[1, 2, 4]
	max_leaf_nodes	[None]
	max_features	['auto', 'sqrt']
	bootstrap	[True, False]
Naive Bayes	var_smoothing	[0.00000001, 0.000000001, 0.00000001]