GridSearchCV

class sklearn.model_selection.GridSearchCV(estimator, param_grid, *, scoring=None, n_jobs=None, refit=True, cv=None, verbose=0, pre_dispatch='2*n_jobs', error_score=nan, return_train_score=False)

Parameters

- Estimatorestimator: object.
- param_grid: dict or list of dictionaries
- scoring: str, callable, list, tuple or dict, default=None
- n_jobs: int, default=None
- refit: bool, str, or callable, default=True
- cv: int, cross-validation generator or an iterable, default=None
- verbose: int
- pre_dispatch: int, or str, default=n_jobs
- error_score: 'raise' or numeric, default=np.nan
- return_train_score: bool, default=False

Attributes

- cv_results_dict of numpy (masked) ndarrays
- best_estimator_estimator
- best_score_float
- best_params_dict
- best_index_int
- scorer_function or a dict
- n_splits_int
- refit_time_float
- multimetric_bool

Working of GridSearchCV

- GridSearchCV is the process of performing hyperparameter tuning in order to determine the optimal values for a given model.
- GridSearchCV is a function that comes in Scikit-learn's(or SK-learn) model_selection package.
- This function helps to loop through predefined hyperparameters and fit your estimator (model) on your training set. So, in the end, we can select the best parameters from the listed hyperparameters.
- We pass predefined values for hyperparameters to the GridSearchCV function. This is done by defining a dictionary in which we mention a particular hyperparameter along with the values it can take.
- GridSearchCV tries all the combinations of the values passed in the dictionary and evaluates the model for each combination using the Cross-Validation method.
- Hence after using this function we get accuracy/loss for every combination of hyperparameters and we can choose the one with the best performance.