Name: Ankita Dasgupta
Roll No: J014

SVR API SUMMARY

Parameters:

- kernel*{'linear', 'poly', 'rbf', 'sigmoid', 'precomputed'}, default='rbf'* Specifies the kernel type to be used in the algorithm. It must be one of 'linear', 'poly', 'rbf', 'sigmoid', 'precomputed' or a callable. If none is given, 'rbf' will be used. If a callable is given it is used to precompute the kernel matrix.
- degree*int, default=3* Degree of the polynomial kernel function ('poly'). Ignored by all other kernels.
- gamma*{'scale', 'auto'} or float, default='scale'* Kernel coefficient for 'rbf', 'poly' and 'sigmoid'.
- coef0*float, default=0.0* Independent term in kernel function. It is only significant in 'poly' and 'sigmoid'.
- tol*float, default=1e-3* Tolerance for stopping criterion.
- C*float, default=1.0* Regularization parameter. The strength of the regularization is inversely proportional to C. Must be strictly positive. The penalty is a squared l2 penalty.
- epsilon*float, default=0.1* Epsilon in the epsilon-SVR model. It specifies the epsilon-tube within which no penalty is associated in the training loss function with points predicted within a distance epsilon from the actual value.
- shrinking*bool, default=True*Whether to use the shrinking heuristic.
- cache_size*float, default=200* Specify the size of the kernel cache (in MB).
- verbose*bool, default=False* Enable verbose output. Note that this setting takes advantage of a per-process runtime setting in libsvm that, if enabled, may not work properly in a multithreaded context.
- max_iter*int, default=-1* Hard limit on iterations within solver, or -1 for no limit.

Attributes:

- class_weight_*ndarray of shape (n_classes,)* Multipliers of parameter C for each class. Computed based on the class_weight parameter.
- coef_*ndarray of shape (1, n_features)* Weights assigned to the features (coefficients in the primal problem). This is only available in the case of a linear kernel.
- dual_coef_*ndarray of shape (1, n_SV)* Coefficients of the support vector in the decision function.
- fit_status_*int* 0 if correctly fitted, 1 otherwise (will raise warning)intercept_*ndarray of shape (1,)* Constants in decision function.
- n_support_*ndarray of shape (n_classes,), dtype=int32* Number of support vectors for each class.

- shape_fit_*tuple of int of shape (n_dimensions_of_X,)* Array dimensions of training vector x.
- support_*ndarray of shape (n_SV,)* Indices of support vectors.
- support_vectors_*ndarray of shape (n_SV, n_features)*.