CHNR

Supplement 4. Description of key hyper parameters

Model	Hyper parameter	Explanation
Random forest	bootstrap	Allows repeated sampling of data points during tree training
	max_depth	Sets the maximum depth of decision trees
	min_sample_leaf	Defines the minimum samples required in a leaf node
	min_samples_split	Specifies the minimum samples needed to split an internal node
	n_estimators	Determines the number of decision trees in the forest
	random_state	Ensures reproducibility by setting a consistent seed