

S1. The setting of parameters and hyper-parameters of compared methods.

As for the traditional methods, we set these values by default. The details are presented as follows:

Logistic regression (penalty='l2', tol=0.0001, C=1.0, intercept\_scaling=1, class\_weight=None, max\_iter=100)

K-nearest neighbor (n\_neighbors=5, weights='uniform', leaf\_size=30, p=2, metric='minkowski')

Random forest (n\_estimators=100, criterion='gini', min\_samples\_split=2, min\_samples\_leaf=1, min\_weight\_fraction\_leaf=0.0, max\_features='auto', bootstrap=True)

Neural network (hidden\_layer\_sizes=(100, ), activation='relu', \*, solver='adam', alpha=0.0001, batch\_size='auto', learning\_rate\_init=0.001, momentum=0.9)

As for CNN-based models, we experimented on the batch size = 32, learning rate = 0.001, and dropout = 0.5, epoch = 100.