

# Assessment of the Performance of a Low-Cost Air Quality Monitor in an Indoor Environment through Different Calibration Models

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Listing S1: Hyperparameters of RF, SVM, and ANN models used in the experiment.

In this section, the parameters used for the RF, SVM, and ANN models are shown. They are respectively referred to the "sklearn.ensemble.RandomForestRegressor" Application Program Interface (API), the "sklearn.svm.SVR", and the "sklearn.neural\_network.MLPRegressor" of scikit-learn libraries [1].

RandomForestRegressor parameters = {'bootstrap': True, 'ccp\_alpha': 0.0, 'criterion': 'mse', 'max\_depth': 100, 'max\_features': 'auto', 'max\_leaf\_nodes': None, 'max\_samples': None, 'min\_impurity\_decrease': 0.0, 'min\_impurity\_split': None, 'min\_samples\_leaf': 4, 'min\_samples\_split': 2, 'min\_weight\_fraction\_leaf': 0.0, 'n\_estimators': 1200, 'n\_jobs': None, 'oob\_score': False, 'random\_state': 42, 'verbose': 0, 'warm\_start': False}.

sklearn.svm.SVRparameters = {'C': 10000.0, 'cache\_size': 200, 'coef0': 0.0, 'degree': 3, 'epsilon': 0.1, 'gamma': 0.00015, 'kernel': 'rbf', 'max\_iter': -1, 'shrinking': True, 'tol': 0.001, 'verbose': False}

sklearn.neural\_network.MLPRegressorparameters = {'activation': 'logistic', 'alpha': 5e-05, 'batch\_size': 'auto', 'beta\_1': 0.9, 'beta\_2': 0.999, 'early\_stopping': False, 'epsilon': 1e-08, 'hidden\_layer\_sizes': (150, 50, 150), 'learning\_rate': 'adaptive', 'learning\_rate\_init': 0.001, 'max\_fun': 15000, 'max\_iter': 2000, 'momentum': 0.9, 'n\_iter\_no\_change': 10, 'nesterovs\_momentum': True, 'power\_t': 0.5, 'random\_state': 1, 'shuffle': True, 'solver': 'lbfgs', 'tol': 0.0001, 'validation\_fraction': 0.1, 'verbose': False, 'warm\_start': False}