```
spiral_KNN INFO:
Best hyper paramters: {'n_neighbors': 7}
Best accuracy value:  0.536
prediction score:  0.4746666666666667
KNeighborsClassifier(algorithm='auto', leaf_size=30, metric='minkowski',
                     metric_params=None, n_jobs=None, n_neighbors=7, p=2,
                     weights='uniform')
```


fig1: [-1, 1] simulation data

fig2: spiral_KNN trained on [-1, 1]

fig3: [-2, 2] simulation data

fig4: spiral_KNN feature prediction on [-2, 2] simulation data

fig5: spiral_KNN posterior (901 masses, [-2, 2])

fig6: spiral_KNN posterior (22501 masses, [-2, 2])
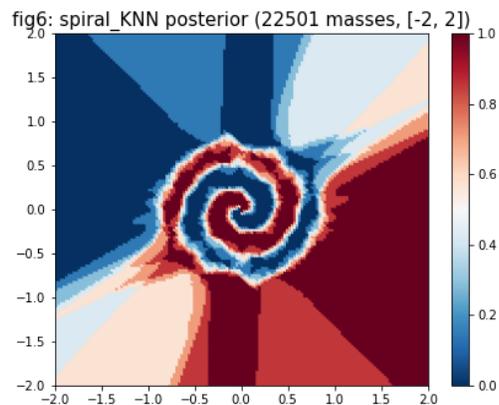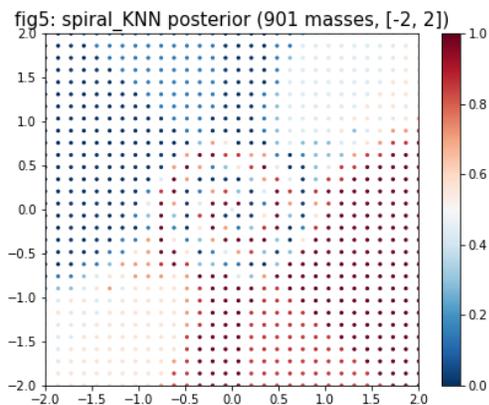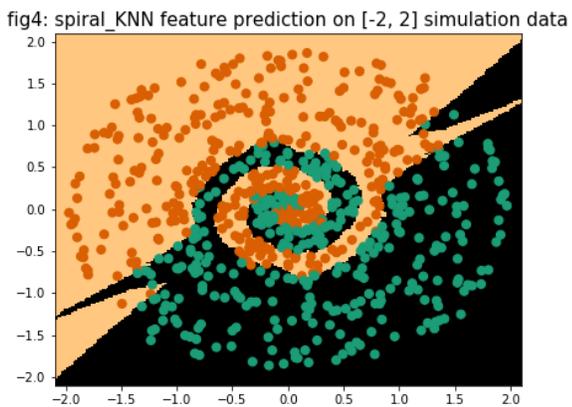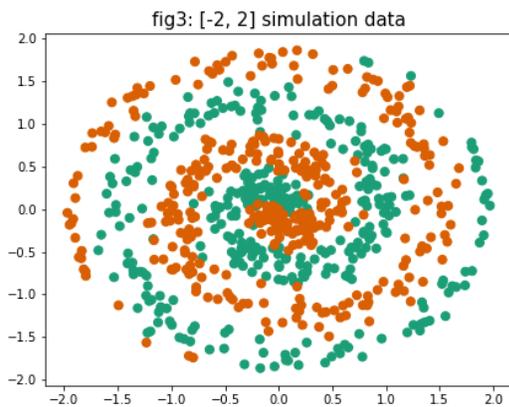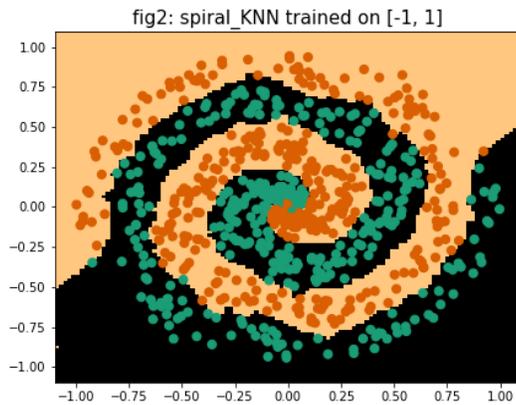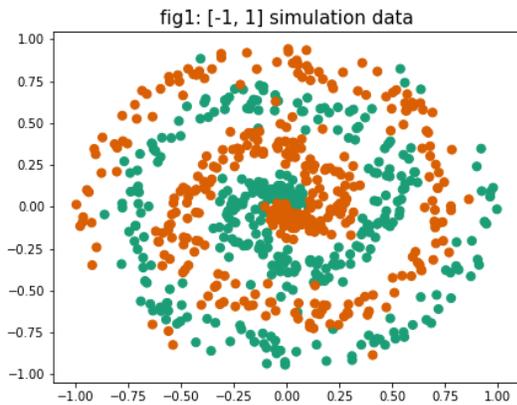
```
spiral_SVC INFO:
Best hyper paramters: {'C': 9.0, 'probability': True}
Best accuracy value:  0.21866666666666665
prediction score:  0.3893333333333333
SVC(C=9.0, break_ties=False, cache_size=200, class_weight=None, coef0=0.0,
    decision_function_shape='ovr', degree=3, gamma='scale', kernel='rbf',
    max_iter=-1, probability=True, random_state=None, shrinking=True, tol=0.001,
    verbose=False)
```


fig1: [-1, 1] simulation data

fig2: spiral_SVC trained on [-1, 1]

fig3: [-2, 2] simulation data

fig4: spiral_SVC feature prediction on [-2, 2] simulation data

fig5: spiral_SVC posterior (901 masses, [-2, 2])

fig6: spiral_SVC posterior (22501 masses, [-2, 2])
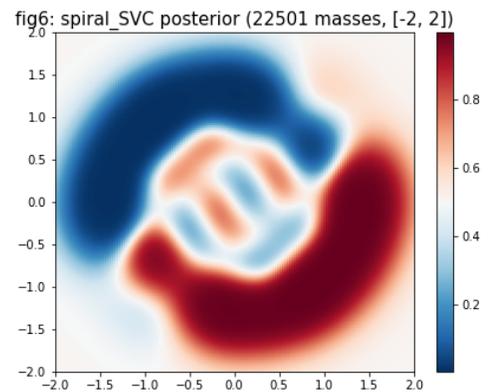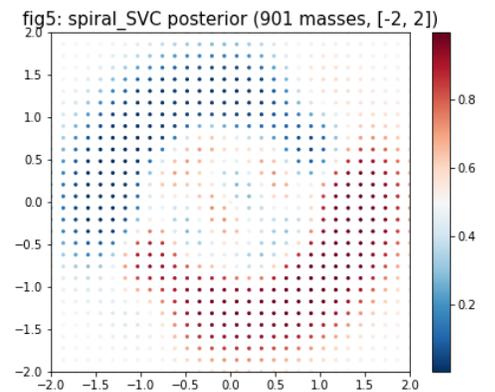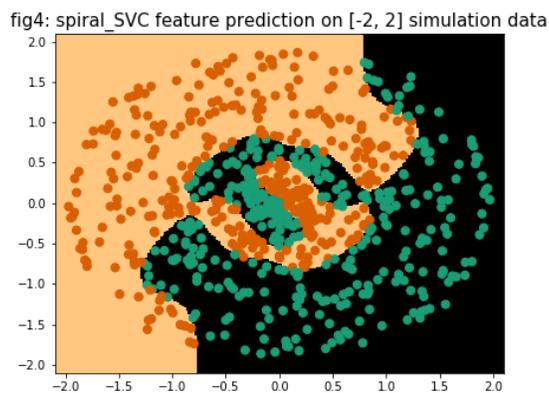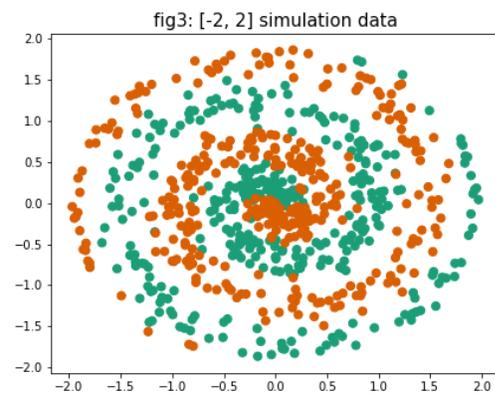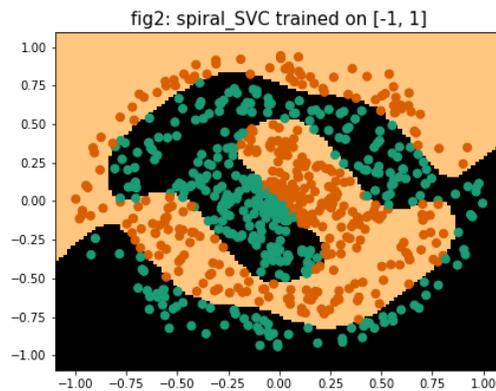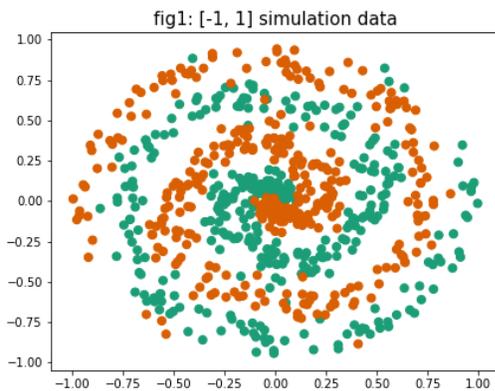
```
spiral_nuSVC INFO:
Best hyper paramters: {'probability': True}
Best accuracy value:  0.264
prediction score:  0.38266666666666665
NuSVC(break_ties=False, cache_size=200, class_weight=None, coef0=0.0,
      decision_function_shape='ovr', degree=3, gamma='scale', kernel='rbf',
      max_iter=-1, nu=0.5, probability=True, random_state=None, shrinking=True,
      tol=0.001, verbose=False)
```


fig1: [-1, 1] simulation data

fig2: spiral_nuSVC trained on [-1, 1]

fig3: [-2, 2] simulation data

fig4: spiral_nuSVC feature prediction on [-2, 2] simulation data

fig5: spiral_nuSVC posterior (901 masses, [-2, 2])

fig6: spiral_nuSVC posterior (22501 masses, [-2, 2])
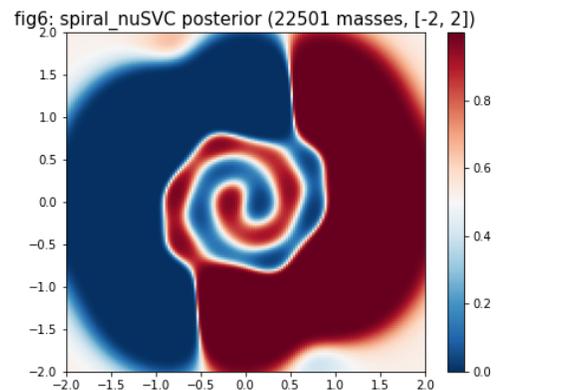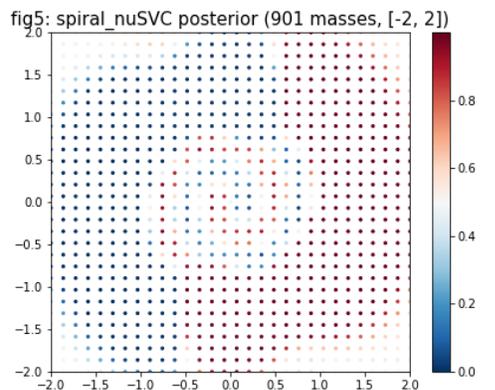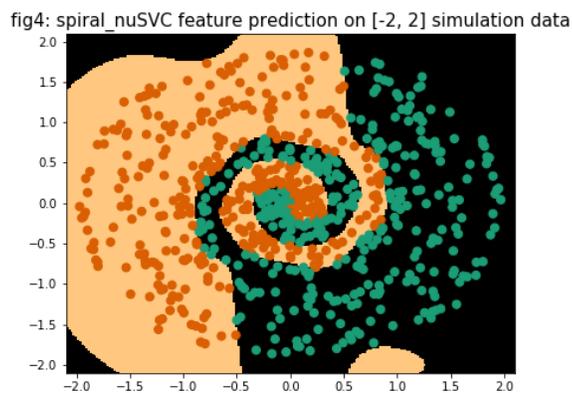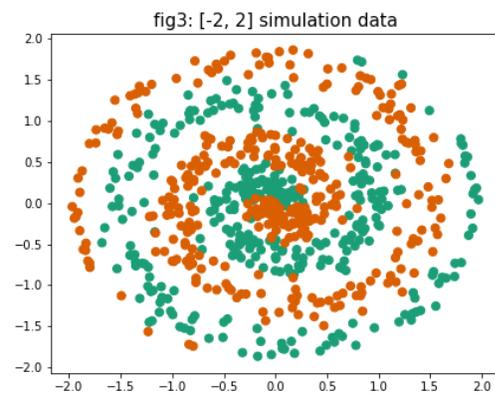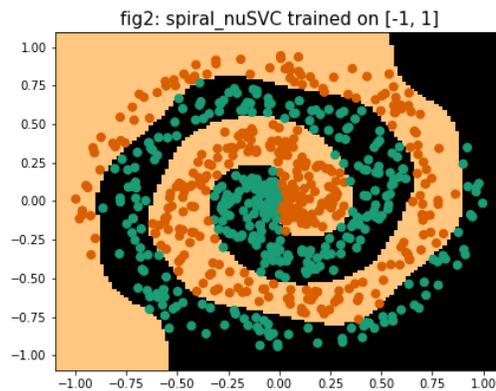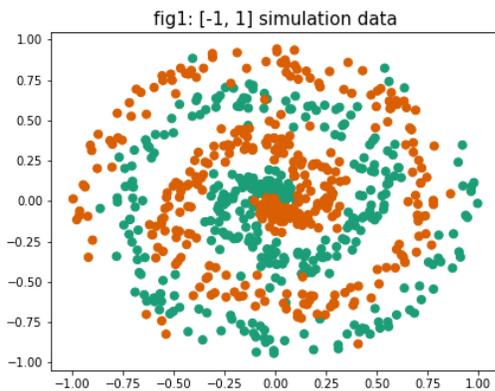
```
spiral_XGBoost INFO:
Best hyper paramters: {'gamma': 0.4444444444444444, 'n_jobs': -1}
Best accuracy value:  0.45066666666666666
prediction score:  0.4666666666666667
XGBClassifier(base_score=0.5, booster=None, colsample_bylevel=1,
              colsample_bynode=1, colsample_bytree=1, gamma=0.4444444444444444,
              gpu_id=-1, importance_type='gain', interaction_constraints=None,
              learning_rate=0.300000012, max_delta_step=0, max_depth=6,
              min_child_weight=1, missing=nan, monotone_constraints=None,
              n_estimators=100, n_jobs=-1, num_parallel_tree=1,
              objective='binary:logistic', random_state=0, reg_alpha=0,
              reg_lambda=1, scale_pos_weight=1, subsample=1, tree_method=None,
              validate_parameters=False, verbosity=None)
```


fig1: [-1, 1] simulation data

fig2: spiral_XGBoost trained on [-1, 1]

fig3: [-2, 2] simulation data

fig4: spiral_XGBoost feature prediction on [-2, 2] simulation data

fig5: spiral_XGBoost posterior (901 masses, [-2, 2])

fig6: spiral_XGBoost posterior (22501 masses, [-2, 2])
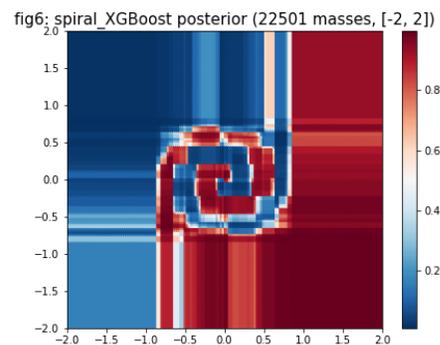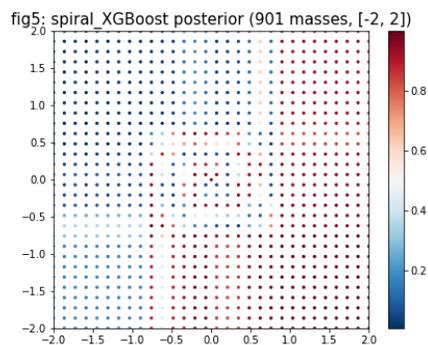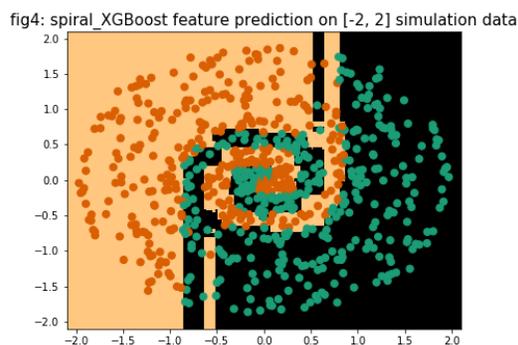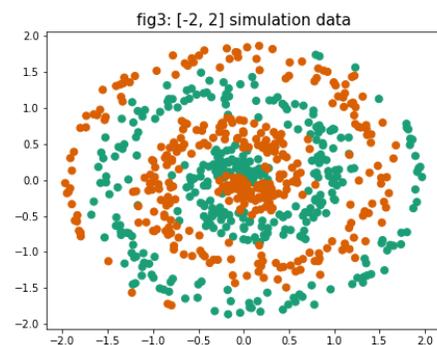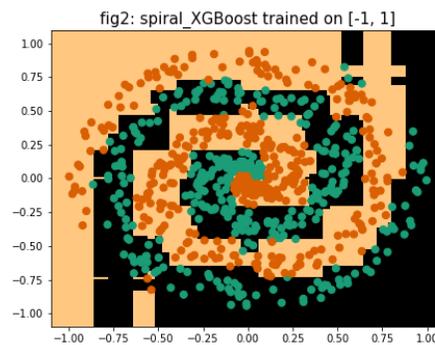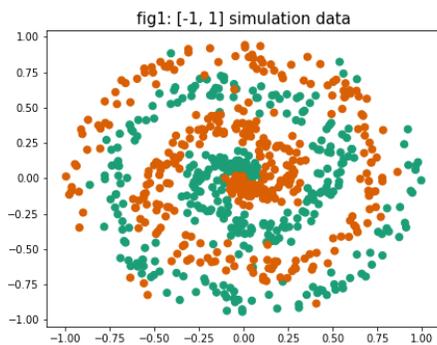
```
spiral_overparam-MLP INFO:
Best hyper paramters: {'activation': 'relu', 'alpha': 0, 'learning_rate_init': 0.0001,
'max_iter': 10000, 'solver': 'lbfgs'}
Best accuracy value:  0.5333333333333334
prediction score:  0.484
MLPClassifier(activation='relu', alpha=0, batch_size='auto', beta_1=0.9,
              beta_2=0.999, early_stopping=False, epsilon=1e-08,
              hidden_layer_sizes=(100,), learning_rate='constant',
              learning_rate_init=0.0001, max_fun=15000, max_iter=10000,
              momentum=0.9, n_iter_no_change=10, nesterovs_momentum=True,
              power_t=0.5, random_state=None, shuffle=True, solver='lbfgs',
              tol=0.0001, validation_fraction=0.1, verbose=False,
              warm_start=False)
```


fig1: [-1, 1] simulation data

fig2: spiral_overparam-MLP trained on [-1, 1]

fig3: [-2, 2] simulation data

fig4: spiral_overparam-MLP feature prediction on [-2, 2] simulation data

fig5: spiral_overparam-MLP posterior (901 masses, [-2, 2])

fig6: spiral_overparam-MLP posterior (22501 masses, [-2, 2])
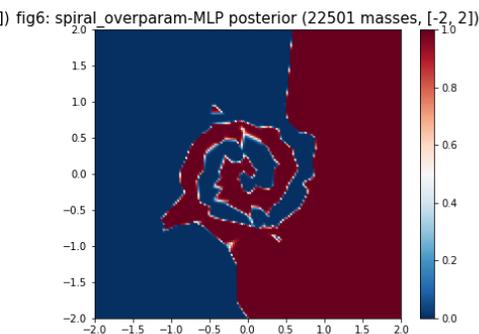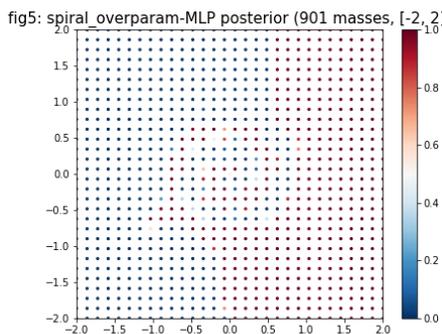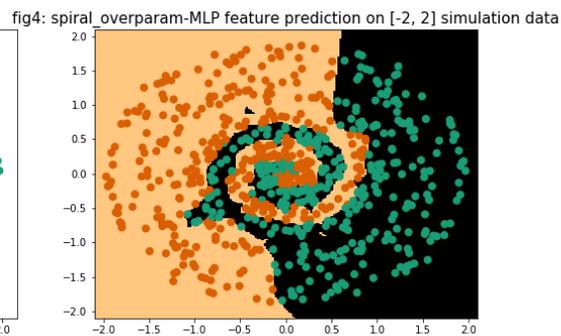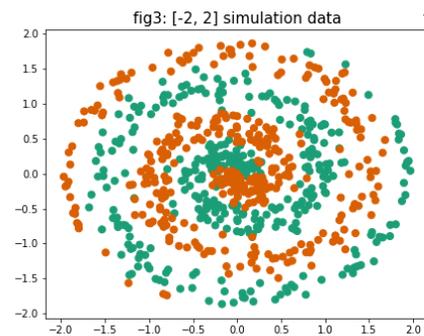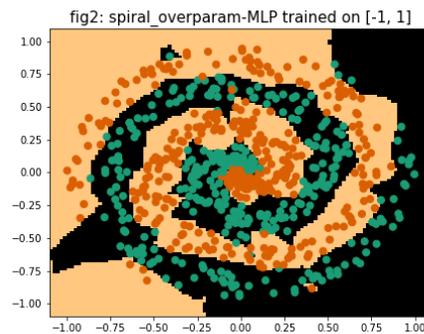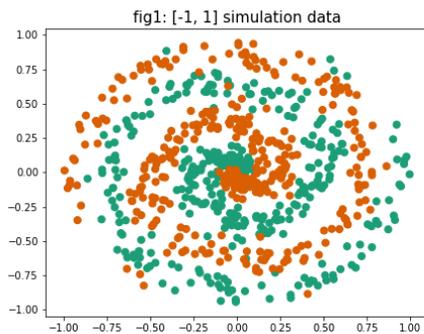
```
spiral_RF INFO:
Best hyper paramters: {'max_depth': 18, 'n_estimators': 7}
Best accuracy value:  0.5066666666666666
prediction score:  0.4706666666666667
RandomForestClassifier(bootstrap=True, ccp_alpha=0.0, class_weight=None,
                       criterion='gini', max_depth=18, max_features='auto',
                       max_leaf_nodes=None, max_samples=None,
                       min_impurity_decrease=0.0, min_impurity_split=None,
                       min_samples_leaf=1, min_samples_split=2,
                       min_weight_fraction_leaf=0.0, n_estimators=7, n_jobs=-1,
                       oob_score=False, random_state=None, verbose=0,
                       warm_start=False)
```


fig1: [-1, 1] simulation data
fig2: spiral_RF trained on [-1, 1]
fig3: [-2, 2] simulation data
fig4: spiral_RF feature prediction on [-2, 2] simulation data
fig5: spiral_RF posterior (901 masses, [-2, 2])
fig6: spiral_RF posterior (22501 masses, [-2, 2])