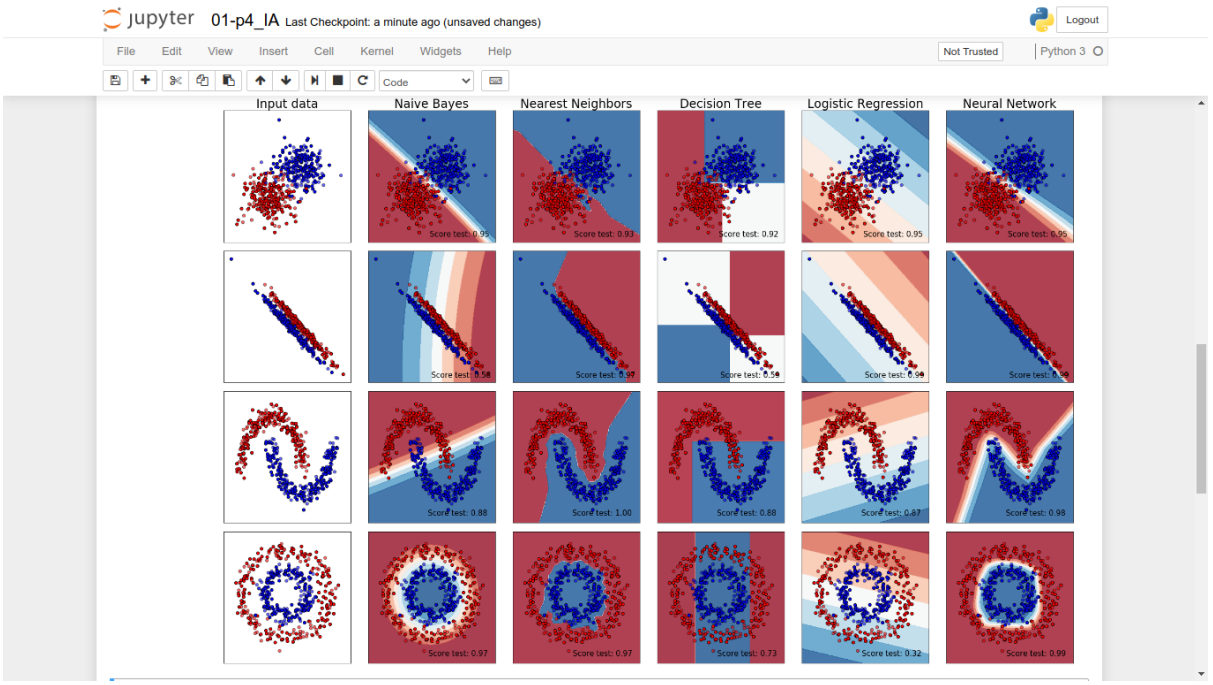
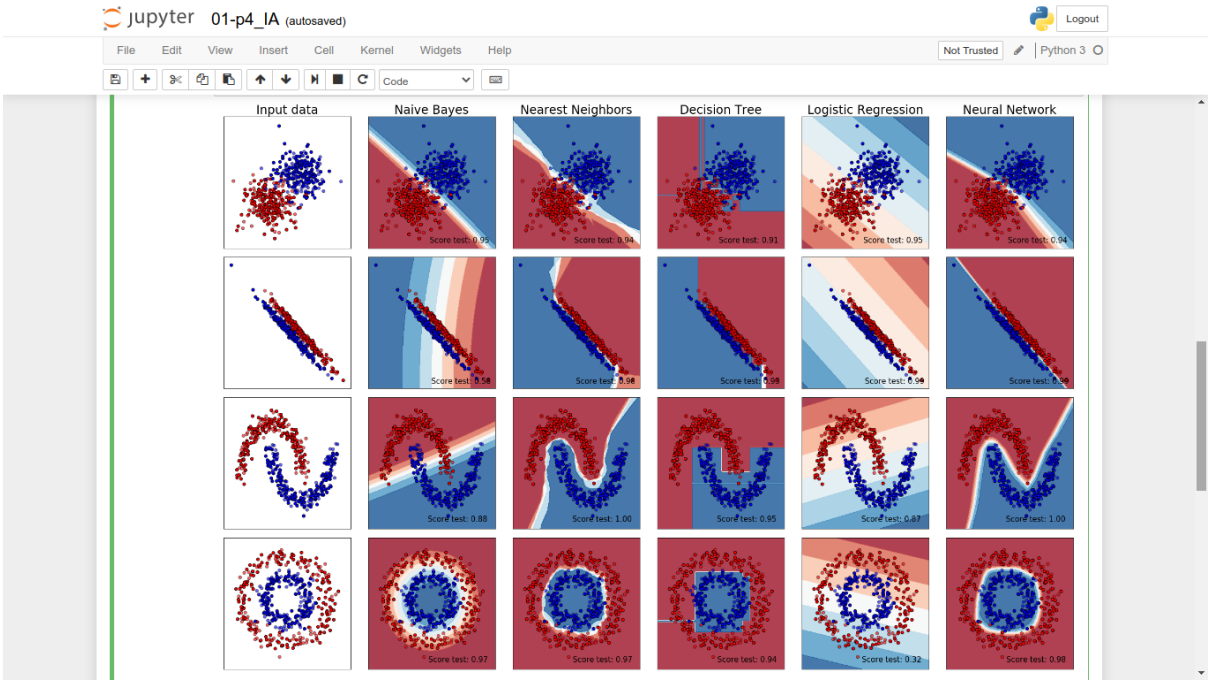
ASSIGNMENT 4:
MACHINE LEARNING

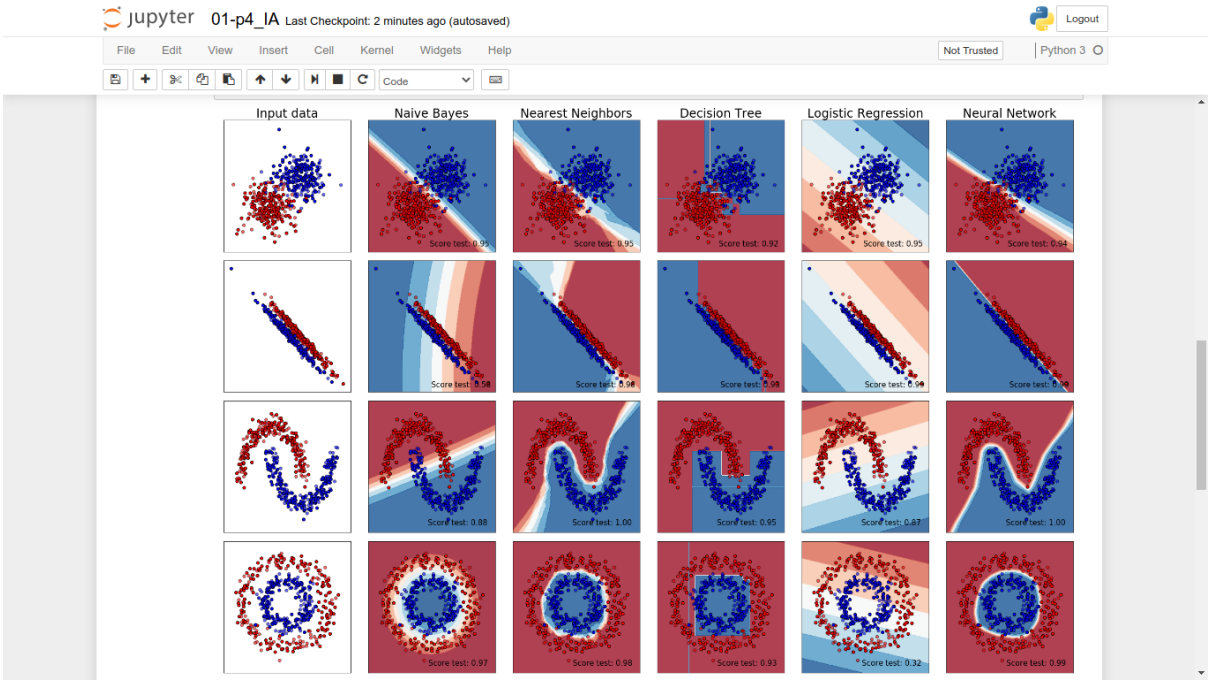
Ejercicio 1:




```
classifiers = [("Naive Bayes", GaussianNB()),
               ("Nearest Neighbors",
                KNeighborsClassifier(n_neighbors=1)), # número de vecinos
               ("Decision Tree",
                DecisionTreeClassifier(criterion='entropy',
                                       max_depth=2)), # profundidad máxima del árbol
               ("Logistic Regression",
                LogisticRegression(C=1e10,solver='lbfgs')), # C: cuanto más alto menos
regularización
               ("Neural Network",
                MLPClassifier(hidden_layer_sizes=(50,),
                              max_iter=1000,
                              alpha=0))]
```




```
classifiers = [("Naive Bayes", GaussianNB()),
               ("Nearest Neighbors",
                KNeighborsClassifier(n_neighbors=4)), # número de vecinos
               ("Decision Tree",
                DecisionTreeClassifier(criterion='entropy',
                                       max_depth=8)), # profundidad máxima del árbol
               ("Logistic Regression",
                LogisticRegression(C=1e10,solver='lbfgs')), # C: cuanto más alto menos
regularización
               ("Neural Network",
                MLPClassifier(hidden_layer_sizes=(50, 10, 20),
                              max_iter=1000,
                              alpha=0))]
```




```
classifiers = [("Naive Bayes", GaussianNB()),
               ("Nearest Neighbors",
                KNeighborsClassifier(n_neighbors=8)), # número de vecinos
               ("Decision Tree",
                DecisionTreeClassifier(criterion='entropy',
                                       max_depth=16)), # profundidad máxima del árbol
               ("Logistic Regression",
                LogisticRegression(C=1e10,solver='lbfgs')), # C: cuanto más alto menos
regularización
               ("Neural Network",
                MLPClassifier(hidden_layer_sizes=(50, 10, 20, 50),
                              max_iter=1000,
                              alpha=0))]
```