

In this assignment, you should solve the problem of classification by means of Multi Layered Perceptron (MLP) and Radial Basis Function (RBF).

You should submit the completed `neural_net.py`, `mlp.ipynb` and `rbf.ipynb` and answer the questions in this report file.

PROBLEM --- MLP

In this problem, you should train an artificial neural network (MLP, Multilayer Perceptron) for classification of Cancer Diagnosis dataset.

You should fill missing parts in given files.

First, open `mlp.ipynb` with jupyter notebook read the description and follow the instructions.

PROBLEM --- RBF

Design an RBF classifier to discriminate digits. Consider all features with no feature conditioning.

You should fill missing parts in given files.

Open `rbf.ipynb` with jupyter notebook, read the description and follow the instructions.

Extra Questions:

- a. Try to improve your results by bootstrapping and adding perturbation to dataset.
- b. Is there a considerable difference between the results of this assignment and the previous one? Explain.