Neural network models for regression of Open Data from the Basque Country

1 Description

Governments and organization are increasingly encouraging the creation of open data platforms that could allow software developers and companies to propose creative uses of the open data to solve problems. In the Basque Country, the *Open Data Euskadi* initiative[1]. Other countries and regions in Europe propose similar initiatives.

2 Objectives

The goal of this project is to apply neural network regression methods to the analysis of open data. This is a very open problem where the students will identify the regression machine learning task by analyzing the data available from Open Data Euskadi. For students that do not understand Basque or Spanish, they may use an open data repository from their country (e.g., Germany, France, etc).

The student should: 1) Clearly state the problem addressed and database that will be used. 2) Select an NN architecture for the tasks. 3) Implement the model learning procedure. 4) Evaluating the model. It could be compared with other ML models that are not based on NNs or compare different variants of the model (i.e., notably different architectures).

As in other projects, a report should describe the characteristics of the design, implementation, and results. A Jupyter notebook should include calls to the implemented function that illustrate the way it works.

3 Suggestions

- Implementations can use any Python library that implements NNs.

[1] `https://opendata.euskadi.eus/inicio/`