Capstone Project 1: Project Proposal

In France, the distribution of healthcare professional on the whole territory is problematic. Indeed, people living in villages far from big cities complain about the lack of doctors and the very long delay to have a medical appointment.

The purpose of this project is to construct a model with machine learning to predict the distribution of healthcare professional in France considering the municipality, the region, the population of municipalities, the specialty of doctors….

Potential clients of this project could be the French State which manages the public hospitals, private groups that manage private clinics or healthcare professionals who want to settle down and open a practice. This would allow them to learn about areas that lack healthcare professional to know where to locate potential future medical infrastructure.

For that, I will use two sets of data found on the website https://public.opendatasoft.com et the website https://data.opendatasoft.com.

First Dataset: This dataset (149 477 x 19 cells) displays healthcare professional, their location and coordinates, the nature of their activity, the technical acts that they perform in France.
https://public.opendatasoft.com/explore/dataset/annuaire-des-professionnels-de-sante/export/

Second Dataset: This dataset (39724 x 25 cells) displays the population and the area for each municipality in France in 2015.
https://data.opendatasoft.com/explore/dataset/code-postal-code-insee-2015%40public/export/

Both datasets will be used in the csv format and the first step of this project will be the merge of the datasets using zip codes of different municipalities with python.

The project will be presented as an interactive map where we will be able to observe on a map of the France the distribution of health professionals according to their specialty and the population of each municipality.