Assignment 2

Vaccination Analysis

Python for machine learning

HT 2021

Introduction

In this task, you will create a program that analyses and visualizes one dataset. The data you are going to analyse will be available via course GitHub. Your code should be written in an object-oriented way and should contain both private and public methods. Your program should be run from the terminal and the user should be able to set different flags to be able to get different things from program, such as a particular analysis or type of plot. When the program started, it should read data from a file, perform the analysis that the user has ordered and then visualize the result.

Requirements for the program

In order for you to pass the assignment, your program must meet

the following requirements:

* It must contain at least one class using both private and public methods
* It should parse the user's input using angry parse
* Default values ​​and descriptions for each flag must be in argparse
* At least 2 arguments must be required
* The program should be able to read data in a specific format, from a .csv file

• The program must use at least one class, with at least 2 class methods in addition to the constructor. It is optional to also use external functions to modify, analyse and visualize the data depending on user flags

Possible flags that the user should be able to set are:

o --country-1: the first country the user wants to analyse (required)

o --country-2: the other country that the user wants to analyse (optional)

o --data flag: which data the user wants to analyse (required)

Requirements for submission

Your GitHub repo should include the following:

• A README file with instructions on how the program works and how

it starts

• A Requirements file so that the user can install all relevant packages

• A python file with the main method

• At least one python file with the data management class and any

auxiliary methods

We do not provide tips on naming or dividing variables, classes or

functions, but will take it into account as well as whether PEP-8 is followed in the code when we

review your solutions.

Tips:

The program should read data. The program should have a class called Datahandler with a method to process and visualize the data. This should be in a separate file: Datahandler.py.

The init method should read the from the file to a pandas dataframe. A privet method should be \_extract\_country\_data(country) that returns a subset of all data. A good public methos is plot\_vaccinations(). Use argparse. The idea is the user with arguments should be able to tell the script to present something specific from the data.

Three arguments should be used: --country1. --country2, --data-flag

Tips: --data-flag daily-vaccines could be used to say what the script should do with the data analysis.

You could use other flags as well like -- visualize: A boolean for visualizang.