

Programming with Python

Lab Assignment 7

Que A. Read data file `university_rankings.csv` in pandas dataframe and based on this data answer the following questions.

1. Find out the data is for which years using the years column?
2. Find out which all columns have missing values?
3. Universities from how many countries are available in this data?
4. Which country has the highest number of universities for 2015?
5. Find out the top 10 Institute in terms of number of publications for 2014?
6. How many Institutes from India are available in this data in each year?
7. Plot a bar graph showing the number of universities from each country for 2012.

Que B. Data file `covid19_testing.csv` contains data of covid-19 testing, for the year 2020, done in various States and Union Territories of India. The following table describes each column in the dataset:

Column Name	Description
Month	Month of the year
Date	Date of the corresponding month.
State	Name of the State or Union Territory.
TotalSamples	Cumulative number of total samples tested till the given date.
Negative	Cumulative number of negative samples till the given date.
Positive	Cumulative number of positive samples till the given date.

Read data file in a pandas data frame and based on this data answer the following questions:

1. Check the last seven rows for Karnataka.

2. Find out for how many days data is present in the dataset for states - Tripura and Jharkhand.
3. On which day the total number of positive cases crossed the mark of 1 lakh in Maharashtra?
4. In the year 2020, which state has tested the highest number of samples?
5. In the year 2020, which state/UT has tested the lowest number of samples?