DEEP LOGIC

Advanced Python Programing Class

Machine Learning Assignment

Instructions: *Try and answer all the following questions to the best of your ability, all by yourself. If you need any assistance, please reach out to me so I can help you decipher the fair details or interact with fellow classmates for group discussions. Your development environment of choice should be any IDE you would prefer, but the best IDE for this work would be Jupyter Notebook which will allow you to download and save the completed work as an HTML file which you will eventually share with me via email. You also can use Google Colab and share your work and this would be ONLY good during the development stages.*

1. **Using your IDE, load the following libraries to help you work with the Corona-19 datasets. Libraries to use:**
    a) **Numpy**
    b) **Pandas**
    c) **Matplotlib**
    d) **Seaborn**

2. Visit this (https://bit.ly/3myY54v) website and download COVID19_line_list_data.csv to your environment to use for your work.

3. Display Column names
i) Column information
ii) Column Names

4. Print out the first 10 records
i) Remove null values to avoid errors
ii) Call the describe method to get the percentiles/ mean/ std deviation

5. Generates a seaborn count plot of Country/Region

6. Adding appropriate Chart Title gender_Count.set_title('COVID19 Line List by Country.')

7. Generates a count plot for Countries affected/listed
i) country_Count = pd.DataFrame(df)
ii) country_Count = sns.countplot(x="country", data=df)

8. Adding appropriate Chart Title
i) country_Count.set_title('Categorical Country listing coverages.')

9. Create a contingency cross table of the two data fields (gender and country). Add margin totals to the contingency table you just created.

10. Create a heatmap for the contingency cross table
i) country_Count = sns.heatmap(crosstab)
ii) country_Count.set(title='country', xlabel='Country Results', ylabel='Country')