

**(B.TECH) Semester-VII AY 2023-24**

**DL Lab Assignment No. 00**

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| **Date: 06-10-2023** | **Faculty: Prof. Anita Gunjal** |

**Problem Statement:** To revise the pre-requisite of DL andExplore the COVID-19 dataset.

**Objectives:**

1. To understand the basics & Pre-requisite of Deep Learning (DL).

2. To analyze the functions for exploring the Covid-19 dataset.

**Theory:** (describe the following and enlist the different techniques associated with it)

1. **Data Collection:** The process of gathering relevant data from various sources, such as web scraping, APIs, or databases, to train and test machine learning models.
2. **Pre-processing of Data:** Cleaning, transforming, and preparing data for machine learning by handling missing values, scaling features, and encoding categorical variables.
3. **Statistical Analysis**: Analyzing data using statistical methods to uncover patterns, relationships, and insights that can guide machine learning model selection and feature engineering.
4. **Visualization of Data:** Creating graphical representations of data to aid in understanding patterns and trends, and for model evaluation and interpretation in machine learning.

**Operations to be performed on dataset: Steps in Preprocessing of Data**

1. Download the realtime dataset.
2. Open Google Colab (online experimentation )
3. Read the .csv file of dataset
4. Display few observations
5. Display the data summary
6. Perform data preprocessing(handling missing data, etc)
7. Apply sum(),mean(), median(),standard deviation() functions on some attributes.
8. Visualization task: few features like how many patients are COVID positive and negative (at least 5 types of graphs)

**Program code: (paste your program code)**

**Dataset used: (source link & description)**

http://www.cessi.in/coronavirus/pune

**Output:** **(paste output screen & graphs plotted)**

**FAQs:**

1. What is a Classifier?
2. Mention the advantages of EDA.
3. Describe various types of central tendency functions for statistical analysis.
4. Give the applications of NLP.
5. State the significance of Machine Learning (ML).
6. Compare ML and DL.

**Conclusion:**

The pre-requisite of DL was studied and the implementation was performed for analysing Covid-19 dataset.



 