***ML Bootcamp***

(ML Bootcamp is all about building a library for algorithms of basic Machine Learning)

**The Motivation Behind:**

The motivation behind this project is that I am totally devoted towards an Artificial Intelligence and how tis tech works and is fully enthusiast about Machine Learning and have a little bit prior knowledge about this attracts me to go further.

**Working status:**

As per the project, I have done Linear Regression, Polynomial Linear Regression, Logistic Regression, K-Nearest-Neighbor, K-Mean Clustering, Neural Networks with applied all corresponding datasets. ***Some of the status of labelled each project will be provided in Screenshot section***.

**Coding Style:**

My coding style looks simple, reader-friendly and is fairly divided into functions to make it clear, but I apologize as I don’t add comments a lot, I’m improving it nowadays.

**Screenshots:**

Firstly, here is my Polynomial Linear Regression (Cost Value + Graph) with given dataset:

**Here my iterations are 10000, Learning Rate = 0.05 and standardization used.**

Graphical user interface

Description automatically generated

Graphical user interface

Description automatically generated with low confidence

**Above is my Linear Regression graph with costs with given Dataset.**

**The accuracy in Linear Regression is 74.76077433519087%**

**The Logistic Regression Accuracy over EMNIST dataset is 68.49111426447733%**

**Accuracy in my KNN model over EMNIST dataset is 55.74025271977836%**

**Accuracy in my K-Mean Clustering over EMNIST Dataset is ~= 38% (I tried a bit longer here.)**

**Accuracy in my Neural Network over EMNIST dataset is 66.38962092033246% (As there are too many Graphs there).**

**Technologies Used:**

Here as per given guild lines and criterion, I used the following Libraries of Python:

1. **NumPy**: Uses to handle collection of data into a array and do operations.
2. **Matplotlib**: Uses to visualize the data, Cost Values over iterations and all.
3. **Pandas**: Uses to make Data base and load a data file and to clear or filter it to make it usable.
4. **Google Colab**: Uses as IDE as it is more portable, visual-friendly and easily-assessable.

**Signing Off:**

In this ReadMe, I presented all my information about my project called ML-Bootcamp.

Have a nice day,

My name is Abhay Chourasiya. I am from Jabalpur, Madhya Pradesh. I am pursuing Bachelor of Technology in Mining Engineering at IIT (ISM) Dhanbad.