**Title:** Prediction of rise in flood water level using liner regression.

**In brief:** tis project is using real-time data of water level rise of river water level. This data is collected from real-time readings taken from actual place, located in Sangli city. Irwin bridge, built on Krishna River, Sangli.

I have recorded reading of water level from past 7-8 days and associated with respective date of reading.

**Assumptions:**

Water level rise depends on various factors such as precipitation, water discharge from upholding dams, water discharge from down releasing dams.

For analysis it has been assumed that participation and water discharge will be at same rate that has been happening from last 7 days.

**Dataset:** water level readings are in feet.

|  |  |
| --- | --- |
| DATE | WATER\_LEVEL |
| 19/7/24 | 11 |
| 20/7/24 | 15 |
| 21/7/24 | 17 |
| 22/7/24 | 27 |
| 23/7/24 |  |
| 24/7/24 | 30 |
| 25/7/24 | 32 |
| 25/7/24 | 33 |
| 26/7/24 | 37 |
| 27/7/24 | 40 |

Here on 23rd, data is missing hence interpolation method is used to fill up missing value.

Liner regression is statistical model used to predict level values as it is simple to use and easy to implement.

Dataset is divided into testing and training on 80-20 rule. There is not any thumb rule to do partition. It depends on dataset length and type of data.

Model gave Mean absolute error of 43%.