HMSD Assignment-2

This is a team Assignment.

Main Objective: To prepare a generalised tool for the estimation of WQI for any given location

(i) Based on weighting scheme methodology explained (Paper reference: Efficient Water Quality Prediction Using Supervised Machine Learning) **for any generalised location** in the world. Data Source: GEMS

(ii) Based on Indian standards methodology explained (Paper reference: Development of an Overall Index of Pollution for Surface Water Based on generalised classification scheme in Indian Context) **for Indian case studies**. Data sources: CPCB

(iii) Based on Machine Learning Algorithms explained (Paper reference: Efficient Water Quality Prediction Using Supervised Machine Learning) **for any generalised location** in the world given the input as a time series of parameters. Data Source: time series data of parameters for any given location.

User Interface: User will provide the data of various parameters whatever available. The WQI estimation should be able to accommodate for the parameters given and provide WQI index to the user in the form of a classification table, which can be downloadable with one click(ask user to give output file name, then write it to a file). A visualisation in the form of a river stretch with colour classification. A plotting in the form of a bar graph or a line diagram of WQI values if the data given is a time series of parameters.

- Information should be shown telling which colour represents which class in the WQC.
- Input Data links and what parameters should be selected for the calculation WQI are given in the slides.