Welcome to Data 61-failure prediction

User guide

Directory structure

Input files:

You must place the following input files in the correct folder, './data_clean_tools /raw_data '.

1. raw_data_file = './ data_clean_tools /raw_data/SP_WATPIPE.dbf
2. raw_failure_file = './ data_clean_tools /raw_data/ WS_Pipe_Incident_Match.xlsx'

Please see the sample files and prepare your input files according to the correct format.

Output files:

Prediction file will be created in './resulting_data/', for each failure type (burst, fitting, and combined).

Ex: 20 years prediction file for burst failure can be found in:
'./resulting_data/WesternWater_burst/20_years_pipe_failure_counts.csv'

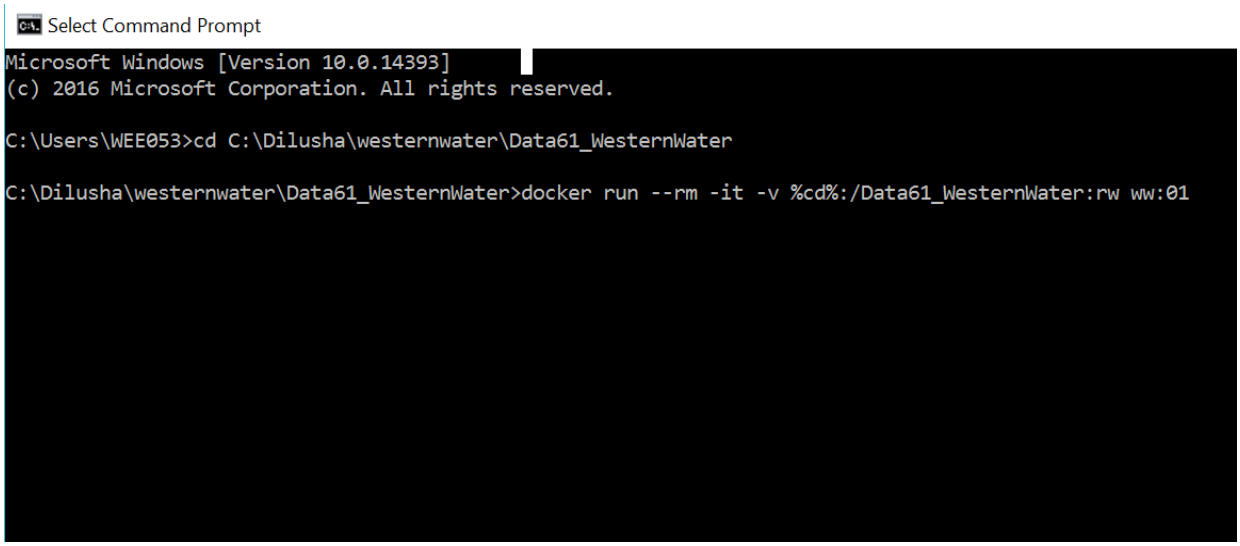
How to run the tool

Step 1: Go to command line. Then change your directory by issuing the below command:

CD FOLDER_PATH\Data61_WesternWater

Step 2: Run the Docker image

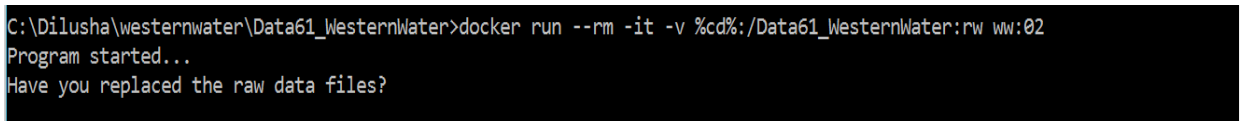
docker run --rm -it -v %cd%:/Data61_WesternWater:rw ww:01

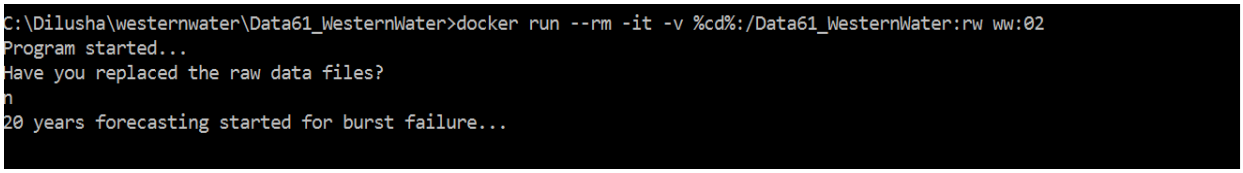


This will prompt a question: "Have you replaced the raw data files (yes/no)?"

You have to provide a response: yes (or y), or no (or n).

If you have modified the raw data files, then you will have to provide: yes (or y). Then the tool will run from the beginning. Otherwise, if you entered no (or n), tool will generate the prediction file using the already trained model based on the existing raw data files.





Step 3: Go to the folder: './resulting_data/', you can find the prediction file for each failure type.

Here, the prediction file: 20_years_pipe_failure_count.csv shows the failure likelihood of each pipe for next 20 years.