Group: 10

Manav Israni 20IM10019

Tanushri tawari 20IM10041

User Manual

Standalone GUI for Auto Annotation for temperature breaks in a reefer container from IoT Data

IoT data obtained from reefer containers is unlabelled data. Hence, supervised Learning algorithms cannot be applied. Manual Labelling may not be feasible or economical.

For the following reasons, we have made a site that collects the data, and help you visualize it and identify the cause of temperature breaches.

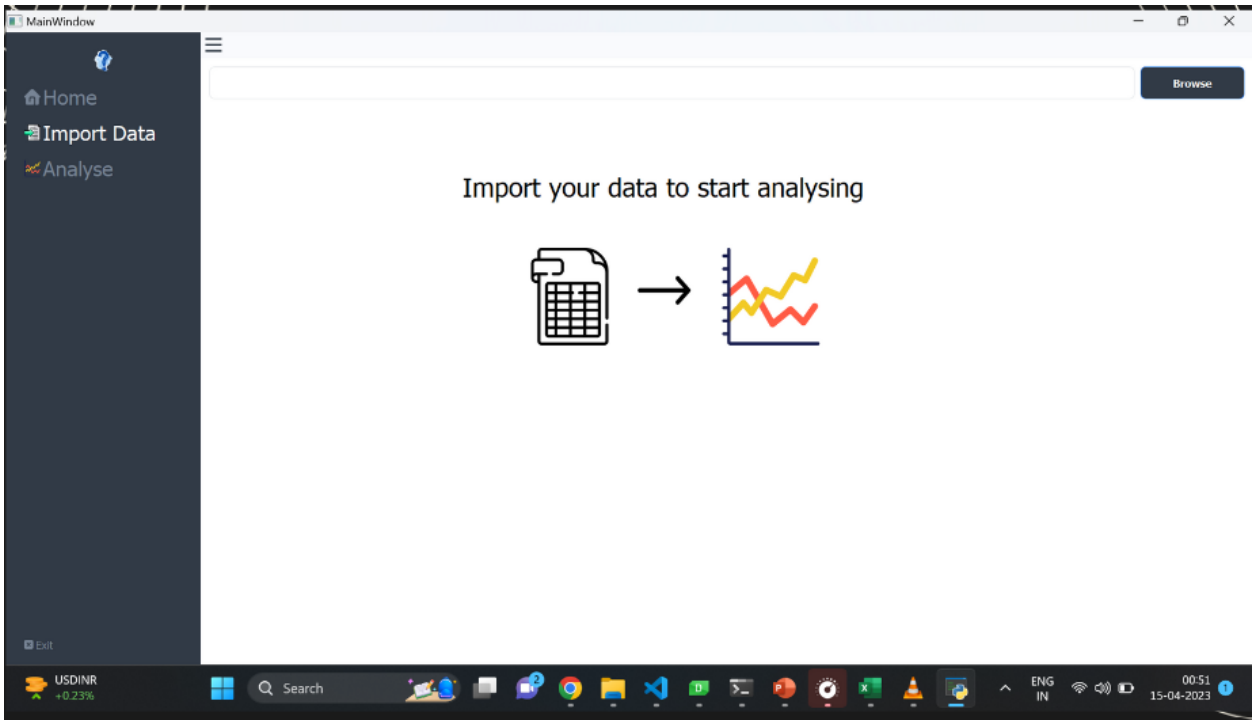
It performs these 5 functions:

1. importing data: unlabelled data
2. descriptive analysis of data
3. identifying temperature breaks in a reefer container
4. clustering temperature breaks with the exact cause
5. labeled data

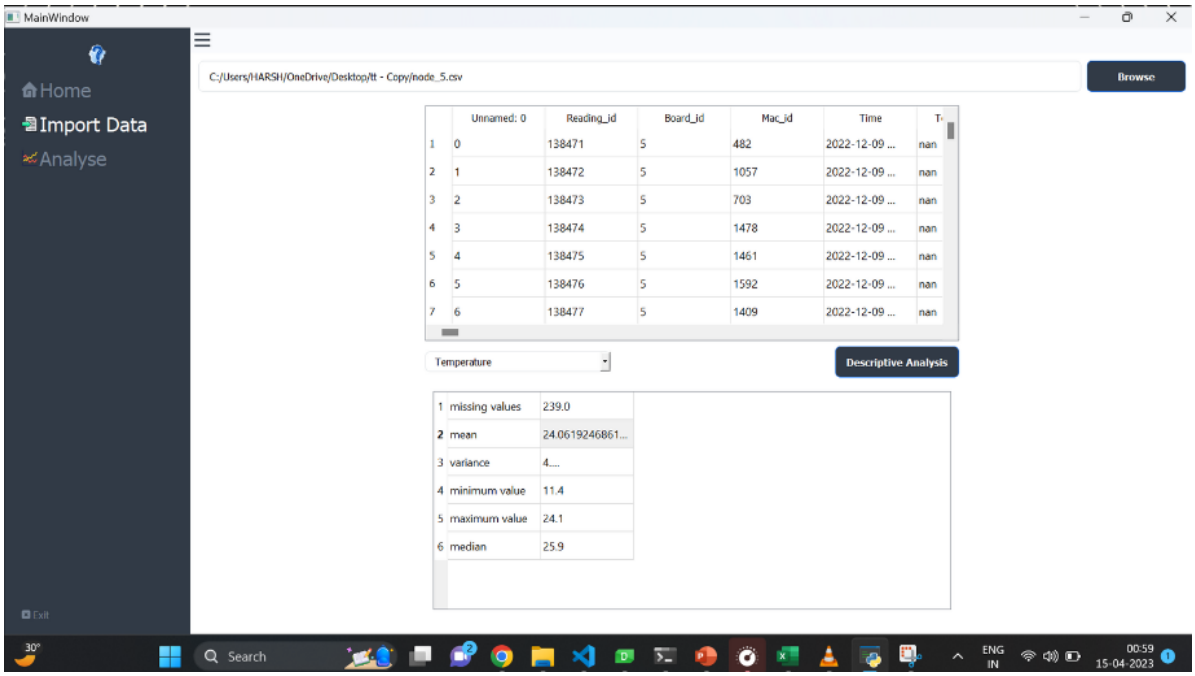
The site has 3 tabs. The first is the Home Page which contains the title and a brief project description.

The second is the Import Data tab where you can import your data file (.csv) using the ‘Browse’ present on the top right-hand corner of the screen. You can browse through your files, and import the one for which you want to perform the descriptive analysis and plot the graphs. On

importing any other data file, an error message is displayed. After importing the data, the data is displayed on the screen. You can also see the address of the file in the address bar on the top.

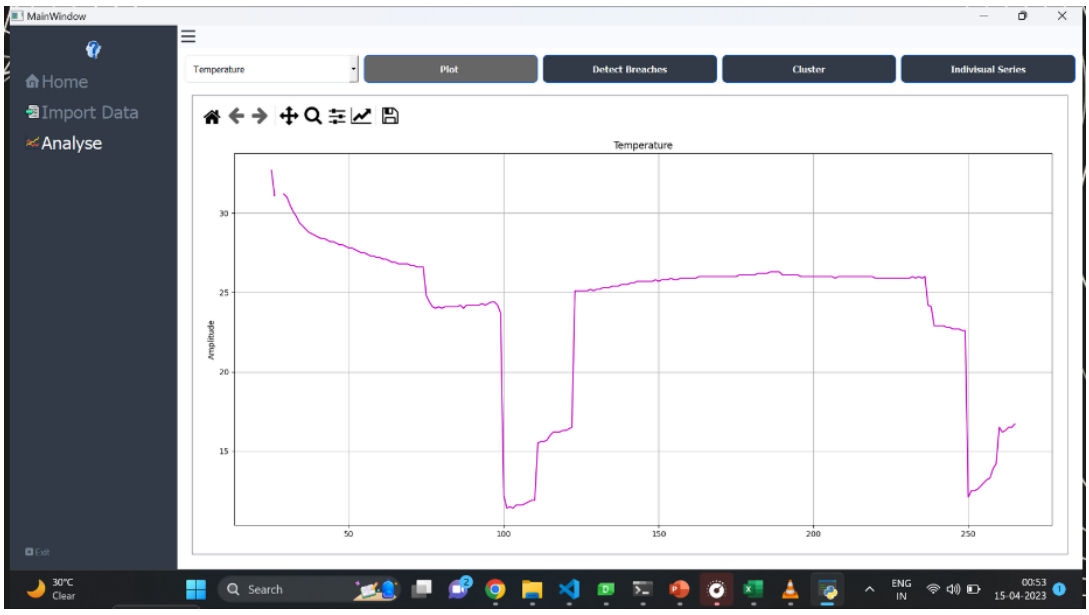


There is a selection box that allows you to choose any one of the columns and perform a descriptive analysis on it by clicking on the ‘Descriptive Analysis’ button. You can find the missing values, the mean, the median, and the variance of the data, and the minimum and the maximum values of the particular column you have selected. From the drop-down menu, you can select any of the column names, and the operation can be performed multiple times, individually for each column.

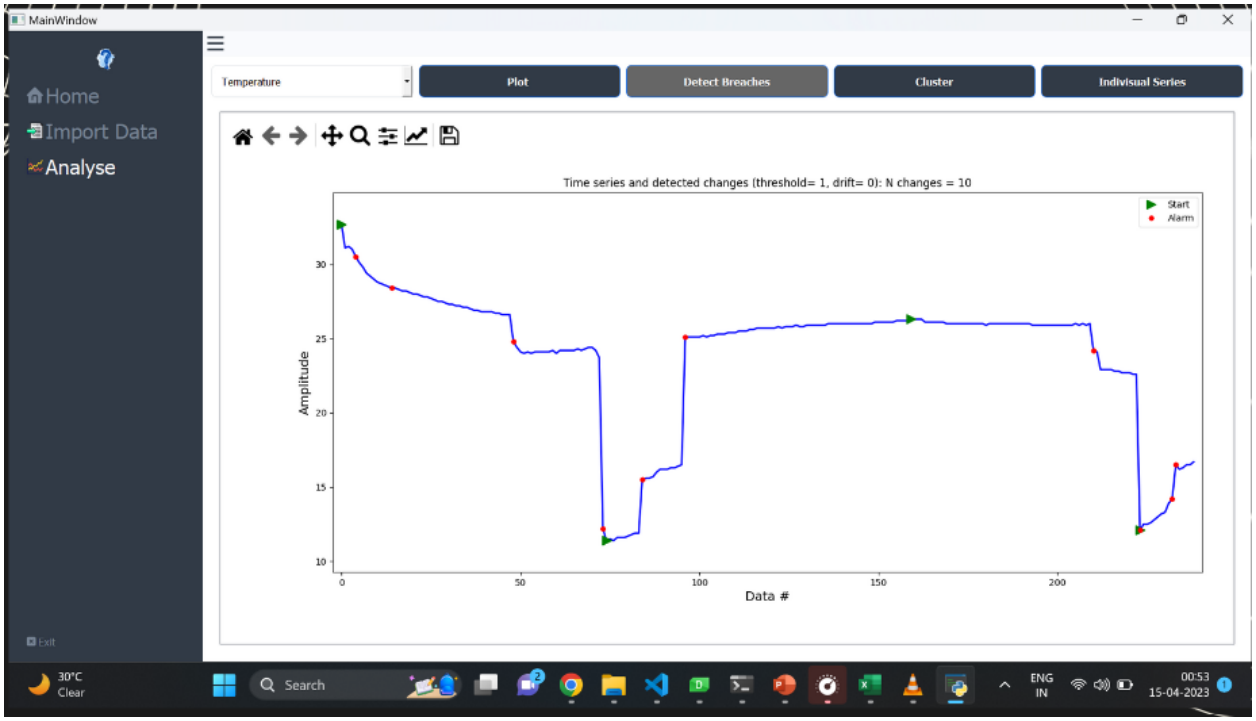


The third is the Analyse tab. This page allows you to visualize the data. Again there is a drop-down menu to select any one of the parameters.
By clicking on the ‘Plot’ button, you can plot a time series graph of the data. The ‘Detect Breaches’ button allows you to detect the points of breaches, that is when a sharp change was detected. The ‘Cluster’ button allows you to cluster the data. You can also save the various graphs.

Plot



Detect Breaches



Cluster