**Outlier Detection Code:**

Overall Logic Description

outlier\_detect\_wip\_v0.8\_cumsum\_bounded.py

Once the data is scored or the model is built the outlier detection code comes in handy in identifying the observations straying away from the predicted value. The general logic is that if a machine continues to stray away for some time then the degree of failure accumulates.

This degree of failure is the residual sums cumulated over day or 10-minute level. Residual sums are the standardized errors.

Function wise the above code can handle scored data from test and holdout data coming directly from the modelling code. The holdout instance contains the validation data and hence the mean and standard deviation of the code is directly calculated from the input data.

For the instance which uses the scored data the support file which is saved during the modelling process is used to standardize the error variable.

LoopPlottingCodes\_v0.5.py

Core functionality is same, difference is this is designed for multi machine model with output features like Current.

NOTE:

Possible bugs or error might arise in the naming conventions. So whenever running this code the input files like the mean and standard deviation, scored data , path etc, column names should be verified before use.

The plotting code on the outlier detection code for both version should be avoided.