**Failed**

**Part 1 (Failed)**

There are thousands of csv file in a folder where the value of 'VYM', 'VBM', 'VRM' columns are the tranmission fault value voltage.

In the end we have to create clusters where similar fault signature diagram(line graph) of the transmission lines to be in same folder :-

Graphs should be cluster in such a way that if there are

* One spike down then one cluster (cluster 1)
* Another spike up then in one cluster (cluster 2)
* One spike both up and down then in one cluster (cluster 3)
* Multiple spikes then another cluster (cluster 4)
* Tripped up (not coming back up) (cluster 5)
* Tripped down (not coming back down) (cluster 6)
* Slow spike like a “U” shape (cluster 7)
* V shape spikes (cluster 8)
* Spike with Bump up (cluster 9)
* Spike with Bump down (cluster 10)

You can Ignore the noises (small disturbance/small fluctuation) of the given csv data. Using Fourier Transformation where data compression of small bumbs to be done and huge frequency shifts to be considered only … from one folder into another folder - don’t use classification logic

Pass 125 values along the number of spikes to the KNN or DNN neural network

Extract the parameters

**Part 2 (Failed)**

There are thousands of csv file in a folder where the value of 'VRM' column are the tranmission fault value voltage.

In the end we have to create clusters where similar fault signature diagram(line graph) of the transmission lines to be in same folder :-

Graphs should be cluster in such a way that if there are

* One spike down then one cluster (cluster 1)
* Another spike up then in one cluster (cluster 2)
* One spike both up and down then in one cluster (cluster 3)
* Multiple spikes then another cluster (cluster 4)
* Tripped up (not coming back up) (cluster 5)
* Tripped down (not coming back down) (cluster 6)
* Slow spike like a “U” shape (cluster 7)
* V shape spikes (cluster 8)
* Spike with Bump up (cluster 9)
* Spike with Bump down (cluster 10)

You can Ignore the noises (small disturbance/small fluctuation) of the given csv data. Using **Convolutional Neural Networks (CNN)** where the features Mean, Standard Deviation, Variance and Dominant Frequency Index … from one folder into another folder

**Part 3 (Failed)**

There are thousands of csv file in a folder where the value of 'VRM' column are the tranmission fault value voltage.

In the end we have to create clusters where similar fault signature diagram(line graph) of the transmission lines to be in same folder :-

You can Ignore the noises/ even suppress them (small disturbance/small fluctuation) of the given csv data. Which Deep Learning Neural Network should be used where the features Mean, Standard Deviation, Variance and Dominant Frequency Index is provided …

**Partial Success**

**Part 5 (Not A Big Success)**

There are thousands of csv file in a folder where the value of 'VRM' column are the tranmission fault value voltage.

In the end we have to create clusters where similar fault signature diagram (line graph) of the transmission lines to be in same folder

You can Ignore the noises (small disturbance/small fluctuation) of the given csv data. Using **LSTM & Fourier Transformation you can also use features as well Mean,** **Standard Deviation, Variance, Dominant Frequency Index for better clustering**--- write full code for it

**Part 6 (Failed not up to the mark of Part 4)**

There are thousands of csv file in a folder where the value of 'VRM' column are the tranmission fault value voltage.

In the end we have to create clusters where similar fault signature diagram(line graph) of the transmission lines to be in same folder

You can Ignore the noises (small disturbance/small fluctuation) of the given csv data. Using **LSTM & Fourier Transformation, Wavelet Transformation** --- write full code for it

**Success**

**Part 4 (Success)**

There are thousands of csv file in a folder where the value of 'VRM' column are the tranmission fault value voltage.

In the end we have to create clusters where similar fault signature diagram (line graph) of the transmission lines to be in same folder

You can Ignore the noises (small disturbance/small fluctuation) of the given csv data. Using **LSTM & Fourier Transformation** --- write full code for it

**Working On**

**Part 7 (Testing)**

There are thousands of csv file in a folder where the value of 'VRM' column **(if Nan value is found ignore that csv files)** are the transmission fault value voltage.

In the end we have to create clusters where similar fault signature diagram (line graph) of the transmission lines to be in same folder

You can Ignore the noises (small disturbance/small fluctuation) of the given csv data. Using **LSTM & Wavelet Transformation** --- write full code for it

**Part 8 (Testing)**

There are thousands of csv file in a folder where the value of 'VRM' column **(if Nan value is found ignore that csv files)** are the transmission fault value voltage.

In the end we have to create clusters where similar fault signature diagram (line graph) of the transmission lines to be in same folder

You can Ignore the noises (small disturbance/small fluctuation) of the given csv data. Using **LSTM & Wavelet Transformation for feature extraction** --- write full code for it

**Part 9 (Testing)**

There are thousands of csv file in a folder where the value of 'VRM' column **(if Nan value is found ignore that csv files)** are the transmission fault value voltage.

In the end we have to create clusters where similar fault signature diagram (line graph) of the transmission lines to be in same folder

You can Ignore the noises (small disturbance/small fluctuation) of the given csv data. Using **LSTM, Fourier & Wavelet Transformation for feature extraction (extract the disturbance part from the time series data and apply wavelet transformation on that part)** --- write full code for it

**Future Steps**

Include LTSM , Fourier Transform **(Success)**

Wavlet Transformation **(Working On)**

Cut the portion where the fault is there this will happen with wavlet transform by extrating the features(How to crop the distribution portion using scipy)

Passing through KNN

Or

Use YOLO **(Future Step)**

Or standard deviation, mean, as well **(Failed)**