Neural network paper

1) I want youll to try Data analysis techniques from Practical Data science book to understand the data some techniques graphs. Use major Data preprocessing techniques. Don’t simply use understand why to use and not to use.

2) Feature selection techniques – Try out all which includes – PCA, stastitical, Genetic algorithm, Linear vector quantization model a “filter approach” etc. Check out the paper how the best method is selected from these methods again based on ROC cure. Paper: A machine learning system for automated whole brain seizure detection

3) Try out the all variant neural network following on preprocessed data with all features and with selected features to see the comparison.

**Variants of neural network whichever possible include:**

Based on activation function

Network topology

Training algorithm

Some new concepts also if possible

4) Check out all the approach with SMOT or any method which handles class imbalance.

5) Present the result in terms of all the evaluation parameters available and those we know including ROC, PR other errors.

I want youll to keep all the results ready with code also which youl have used in separate folder with the datasets used in proper folder.

This paper should cover most of the neural network concepts.

Note: Next paper will be based on ensemble approach. Homogeneous / Heterogenious approaches. Also comparing the results with other techniques and at the end I want a completely new modified approach of our own. Which we can say suits the best for this type of data. Even slight modification of equation or using a new function which is never used will be a challenge. All this work should end by Mid May.

GOOD LUCK