**RNN BASED SENTIMENT ANALYSER**

**Steps Followed:**

* Load json input file i.e., both positive and negative amazon\_cell\_reviews
* Pre-process function filters all unwanted data in input files
* Only ‘summary’ and ‘ratings’ are considered
* Define max\_features=100000, maxlen=250(i.e., cut texts after this number of words (among to max\_features most common words), batch\_size=32
* Use Tokenizer to convert text into sequences so the network can deal with it as input.
* Word embeddings :- words from each text is converted into sequence of vectors to input the neural network

**Building the model:**

* Sequential model is used. Layers are added via **.add()** method.
* Each resulting sequence of vectors is fed as input to the embedding layer. Then LSTM layer is added. The dense layer has one neuron and uses a rectifier activation function.
* The model uses logarithmic loss (binary\_classentropy) and is optimized using the efficient ADAM optimization procedure.
* The output of this model is the loss and accuracy of a text belonging to positive or negative category.
* After the model is trained, we evaluate its loss and accuracy on the test dataset.

**Output :**

**Accuracy : 89.19999%**

**Loss : 38.6335%**

**Result Analysis** : We infer that a better accuracy can be obtained if a network is trained with more datasets, perhaps using a larger embedding and adding more hidden layers.