## **Text Summarization Model**

This repository contains a sequence-to-sequence (seq2seq) model for text summarization using LSTM networks. Below, you will find a detailed description of the model architecture.

### **Model Architecture**

The model consists of an encoder and a decoder, both implemented using LSTM layers. The encoder processes the input text, and the decoder generates the summary.

#### Hyperparameters

* **Latent Dimension**: 300
* **Embedding Dimension**: 200

#### Encoder :-The encoder uses three LSTM layers to process the input text.

#### Decoder:-The decoder uses an embedding layer, an LSTM layer, and a dense layer wrapped with Time Distributed to generate the summary.

### Training:-The model is trained using the RMSprop optimizer and the sparse categorical cross-entropy loss function: