# NATURAL LANGUAGE PROCESSING PROJECT PROPOSAL

## Title: Text summarization using Deep learning.

**Team: Group-3**

**Team Members:**

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**Goals and Objectives:**

**Motivation:**

The main motivation of this project came from preparing summarized notes for exam preparation. Generally, we have our lecture notes, but they are lengthy and has lots of content in it and we really can't use the lecture notes for the exam preparation because, it is covered of small and general examples which help us to understand the concept, repeated concepts with different approach. Let us suppose we have 500 pages of lecture notes, and we can't go through all the 500pages all the time when we are preparing for our exam. So, to overcome this we make a short note of all the important points and convert the 500 pages notes to 10 pages or so depending on the requirement.

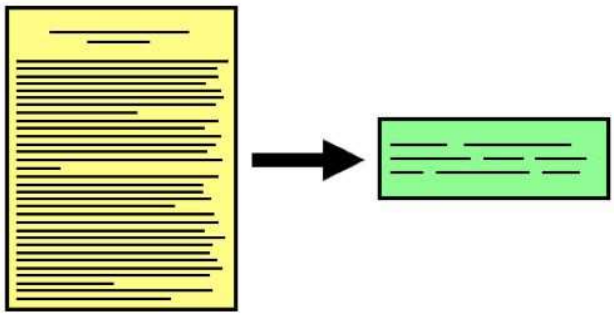

Figure-1: Displaying the Text summarization representation

In the above figure 1, displays the pictorial representation of text summarization, where it shows that 50 lines in one document are summarized into 5 lines.

So, our main aim is to create a text summarization model using Neural network which will provide meaningful sentences without missing the information.

**Significance:**

The text summarization cannot only be used in the lecture notes summarization, when we look at the broader picture, it can be used for Media monitoring, Newsletters, Search Marketing and SEO, Internal document workflow, financial research, Legal Contract analysis, social media marketing and many more. People always need their work to be reduced. So, in the context of reading and making short notes text summarization will be very useful. Important aspects of the text are identified by the Deep Learning model and retained and reframed to represent the same content.

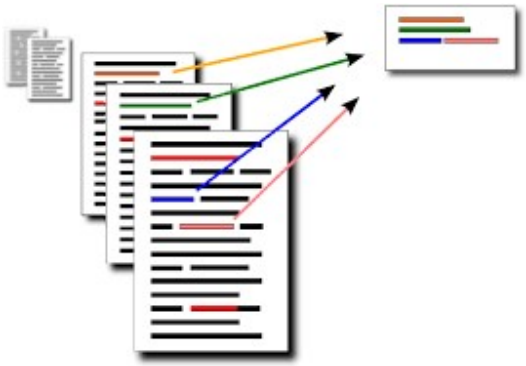

Figure-2: Illustrating the application of Text Summarization.

**Objectives:**

The main objective of our project is to deliver a text summarization model which performs good when compared to the State of Art models and provide meaningful sentences, without missing any important information. Here, we will be working on different models that are present for text summarization and compare the performance of the model. Using tools and implementations of NLP, the model could obtain consistent output that represents the original context as is but with significantly smaller text content.

**Features:**

Deep Learning modelling helps in enhancing the identification of keywords in the text, this improvement leads to summarizing the text without missing any important information. Suppose we have different keywords with the same meaning, then this situation can also be overcome by the deep learning model and provide us best results. The working model will reduce the length of text of given context to smaller text length while maintaining coherent and fluent summary which contain only key points of the text. It identifies key phrases and keywords of the text and summarizes it into shorter form.

**References:**


- Abstractive and Extractive Text Summarization using Document Context Vector and Recurrent Neural Networks. Chandra Khatri, Gyanit Singh, Nish Parikh, 2018.
- Neural Abstractive Text Summarization with Sequence-to-Sequence Models, Tian Shi, Yaser Keneshloo, Naren Ramakrishnan, Chandan K. Reddy, 2018.
- Automatic text summarization of konkani texts using pre-trained word embeddings and deep learning, Jovi D'Silva, Uzzal Sharma 2022.


**GitHub Repository of the Project :**

https://github.com/thor56/NLPTextSummarization.git