

# Automatic Text Summarization

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**Abstract**—In this paper, we have discussed the methods and process to convert large text from an article URL into its summarized version.

**Index Terms**—Text, Data, Summarization

## I. INTRODUCTION

Today, this generation utilises data as the new fuel for industry, and data or information has become quite inexpensive. Knowledge overload has become a growing concern in today's environment, as any piece of information is just a click away. Where we have an abundance of facts or information on any given issue. However, text summary comes into play as a result of the ever-growing generation, where time is a factor in ingesting any information.

Text summarising reduces a vast quantity of data or text to a shorter, more concise, and more relevant summary. This allows the user to cut down on their reading time while also increasing the quantity of useful info that can be crammed into a smaller space.

## II. LITERATURE REVIEW

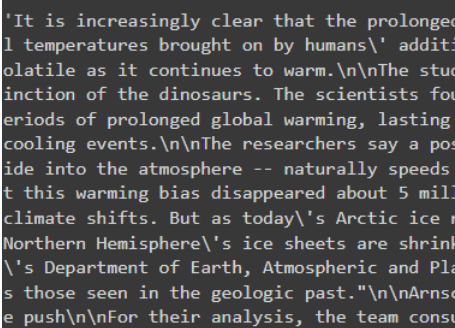
There are many different answers to this challenge, each of which is unique in its own manner:

- Sentiment-based data summarising is one way, in which the model is trained to analyse the sentiment of the text or data before converting it into a summary form. [1]
- Another way uses text and lexical pattern analysis. An analysis of lexical cohesion, mostly via the counting of repetitions, synonyms, super ordinate terms, and paraphrases, gives a network of sentences, some of which are tightly related to one another and others with weak or no relationships at all. Observations and theoretical studies of lexis patterns in text were used to create and build a text processing system. [2]
- Another way is, Selecting relevant sentences from a given text using natural language processing and then combining them to produce a paragraph. [3] [4]

## III. METHODOLOGY

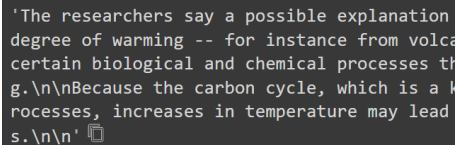
We are going to follow the below methods to achieve our target:

We'll conduct two different sorts of text summarization:



```
'It is increasingly clear that the prolonged  
l temperatures brought on by humans\' additi  
olatile as it continues to warm.\n\nThe stud  
inction of the dinosaurs. The scientists fou  
eriods of prolonged global warming, lasting  
cooling events.\n\nThe researchers say a pos  
ide into the atmosphere -- naturally speeds  
t this warming bias disappeared about 5 mil  
climate shifts. But as today\'s Arctic ice r  
Northern Hemisphere\'s ice sheets are shrink  
\'s Department of Earth, Atmospheric and Pla  
s those seen in the geologic past."\n\nArns  
e push\n\nFor their analysis, the team consu
```

Fig. 1. Raw Text



```
'The researchers say a possible explanation  
degree of warming -- for instance from volca  
certain biological and chemical processes th  
g.\n\nBecause the carbon cycle, which is a k  
rocesses, increases in temperature may lead  
s.\n\n'
```

Fig. 2. Summary Text

### • Extractive Summarization

This method of summarising involves extracting a few key lines from the text and generating a brief summary of them; no new words are created as a result.

### • Abstractive Summarization

We employ advanced natural language algorithms to create a new, shorter text that offers the most important information from the original after understanding and analysing the content.

## IV. EVALUATION

- The above mentioned sorts of summarization will be accomplished using three approaches, two of which are based on TF-IDF text summarization and the other on text rank summarization. The weighted average format is used in all of these approaches.
- Finally, we calculate a score using all three techniques. These scores are now multiplied by a constant before being combined together to get a single score for all sentences.

- Next, we order this score to determine the length of our summary, and then we select the top sentences based on their frequency in the original text to create a summary of the text.

## V. CONCLUSION

After applying the method and testing it through an example we get the following result:

- Original Text from the Article URL provided in Fig 1.
- Summarized Text from of the above text in Fig 2.

## REFERENCES

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- [4] D. Kottachchi and T. N. D. S. Ginige, "Slide Hatch: Smart Slide Generator," 2021 2nd Global Conference for Advancement in Technology (GCAT), 2021, pp.1-5, doi: 10.1109/GCAT52182.2021.9587594.