# News IN: News Summarizer

**Rahul**

**500087457**

**R2142201849**

**CCVT(B-4)**

A news summarizer is a tool or algorithm that automatically condenses a news article or story into a shorter, more condensed version while still retaining the main points and information. This can be useful for quickly getting an overview of a story or for people who have limited time to read the full article. Some news summarizers use natural language processing and machine learning techniques to understand the meaning and structure of the text and extract the most important information.

Cloud deployment is necessary for a news summarizer for a few reasons:

- Scalability: A news summarizer may need to process a large amount of news articles and handle a high volume of requests. Cloud computing platforms, such as AWS, Azure, and Google Cloud, allow for easy scaling of resources, so the system can handle the workload.
- Cost-effectiveness: Running a news summarizer on a cloud platform can be more cost-effective than maintaining your own infrastructure. Cloud providers often offer pay-as-you-go pricing, so you only pay for the resources you use.
- Accessibility: With cloud deployment, the news summarizer can be accessed from anywhere with an internet connection, making it accessible to a global audience.
- Easy deployment and management: Cloud platforms provide easy deployment and management of the news summarizer, allowing for quick deployment and updates.
- Flexibility: Cloud-based deployment allows for the easy integration of additional resources, such as natural language processing, machine learning models, and storage, that can enhance the performance of the news summarizer.

# Literature review

News summarization is a task that aims to produce a condensed version of a news article while retaining the most important information. In recent years, there has been a growing interest in developing automated methods for news summarization using cloud computing. The literature on news summarization using cloud computing can be broadly divided into two categories: cloud-based extractive and abstractive summarization. Cloud-based extractive summarization methods involve selecting and reordering sentences from the original article to create a summary, while cloud-based abstractive summarization methods involve generating new sentences to summarize the article.

Cloud-based extractive summarization methods have been widely studied in the literature. One popular approach is the use of graph-based methods, such as Text Rank which use the structure of the text to identify important sentences. These methods can be easily deployed on cloud computing platforms such as AWS, Azure, and Google Cloud for large-scale processing of news articles.

Cloud-based abstractive summarization methods have also been proposed in recent years. One approach is the use of neural network-based methods, such as encoder-decoder architectures. These methods use neural networks to generate new sentences that summarize the article. These methods can also be deployed on cloud computing platforms, which provide the necessary resources for training and running these models.

Pre-trained language models like BERT, GPT-2, and others have been shown to be effective in various natural language processing tasks, and they have also been applied to cloud-based news summarization. Several recent studies have shown that fine-tuning these models on news summarization tasks using cloud-based resources can produce high-quality summaries.

In conclusion, the literature on news summarization using cloud computing has mainly focused on cloud-based extractive and abstractive summarization methods, with the latter showing promise for generating more fluent and coherent summaries. The use of graph-based methods, neural network-based methods, and pre-trained language models on cloud computing platforms have been widely studied. Cloud computing provides scalability, cost-effectiveness, accessibility, easy deployment, and management, and flexibility for the development and deployment of automated news summarization methods

# Methodology

The working of the application will be consisting of 4 main parts as follows: -

- Fetch the news
- Summarize the news
- Fetch the news metadata
- Display the content into UI

To deploy the application on cloud on AWS we will be creating an EC2 instance.