

# Sentimental Analysis on voice using AWS Comprehend

## **Abstract:**

Sentimental analysis plays an important role in these days because many start-ups have started with user-driven content. Sentiment analysis is an important research area in natural language processing. Natural language processing has a wide range of applications like voice recognition, machine translation, product review, aspect-oriented product analysis, sentiment analysis and text classification etc.

This process will improve the business by analyse the emotions of the conversation. In this project author going to perform sentimental analysis using Amazon Comprehend. Amazon Comprehend is a natural language processing (NLP) service that uses machine learning to extract the content of the document. By using this service can extract the unstructured data like images, voice etc. Thus, will identify the emotions of the conversation and give the output whether the conversation is Positive, Negative, Neutral, or Mixed. To perform this author going to use some services from Aws like s3 which is used for the data store, transcribe which is used for converting the audio to text, Aws Glue is used to generate the metadata from the comprehend file, Aws Comprehend is used to generate the sentiment file from the audio, Lambda is used to trigger from the data store s3, Aws Athena is used to convert text into structured data and finally there is quick sight where he can visualize the data from the given file.

## **Existing System:**

In today's environment where we're suffering from data overload (although this does not mean better or deeper insights), companies might have mountains of customer feedback collected. Yet, it's still difficult for mere humans to interpret it manually without some form of mistake or prejudice. Companies with the best intentions frequently find themselves in a void of perspective. To inform your decision making, you know you need insights, and you know you miss them, but how best to get them, you don't know. The study of sentiment offers answers to what the most critical problems are.

Since sentiment analysis can be automated, decisions can be taken on the basis of a significant amount of knowledge rather than plain intuition, which is not always accurate. Sentiment analysis can be conducted better using AWS services than with conventional approaches such as SVM machine learning processes or any other. Automation can be achieved in this area with the use of AWS services. Better integration and scalability are ensured by the use of cloud services.

## **Proposed System:**

In this project, we propose a model using AWS Comprehend to implement sentimental analysis. This method includes 3 steps that extract the emotion from the audio. a) Transform the audio to text using the AWS Transcribe service. B) Use the AWS Comprehend to translate the text to sentiment. C) By using the AWS Glue and AWS Athena and the final process of building the dashboard in the form of bar charts and suggested framework with several advantages, producing the metadata of the sentiment data and making the demand, it is scalable and able to increase the resources by using the AWS cloud if appropriate.

There is no need to pay extra money under this proposed system. We can just pay for the services we have used, and no need to purchase additional licenses. Tools can write the code once and can use it several times, so the time complexity of the developer can be minimized. In the proposed framework, there will be no security issue because AWS Cloud provides the security service such as Identity Access Management (IAM), provides the data in an encrypted format and no need to buy data.

## **Software Tools:**

1. AWS Comprehend
2. AWS Lambda
3. S3 Bucket
4. AWS Glue
5. AWS Athena
6. VS Code
7. Python3

## **Hardware Tools:**

1. Laptop
2. Operating System – Windows 11
3. RAM: 8GB RAM
4. ROM: 4GB

## **Applications:**

1. This can be integrated with social networking apps for productivity
2. The analysis can be done on various stuff like chat, blogs etc...