# Project on Text to Emotion

Problem Statement:

* We want to design and implement the text to emotion system that which is capable of recognizing the emotion and convert it. Here the challenge is to provide the correct emotion for the product or the statement. The design consists of the TEXT PRE-PROCESSING, EMOTION INVESTIGATION, EMOTION ANALYSIS.

Introduction :

Emotion is the state of mind that is aligned with feelings, and thoughts usually directed toward a specific object. Emotion is a behavior that reflects personal significance or opinion regarding the interaction we have with other human beings or related to a certain event. The human being is able to identify the emotions from textual data and can understand the matter of the text.

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**1)What is text to emotion?**

The research says that when the human is in the thinking process and he is damn sure about his statement then he will express his emotions in the right context of manner and it will be proper aligned in case of words expressing those emotions.

If I want to tell you in simple words then consider if the customer did not like the product by investing the large amount then he will surely give his feedback like **“I am very angry by your product services and gonna file a complaint regarding this issue”.**When you read this kind of feedback then you will be sure that the customer is completely angry about product services and we have to improve it as soon as possible. Text to emotion works, in the same manner, to extract the emotions from the text.

Let’s conclude this, **Text to emotion** is the python package that will assist you to pull out the emotions from the content.

* Processes any textual data, recognizes the emotion embedded in it, and provides the output in the form of a dictionary.
* Well suited with 5 basic emotion categories such as **Happy**, **Angry**, **Sad**, **Surprise,** and **Fear**.

2) **How to use it?**

**Model Architecture :**

**Diagram

Description automatically generated**

Here's the code implementation with **Streamlit App** for the users.

1. Enter the text.
2. Hit the submit button.
3. Get the output in visual form.
   1. Enter the text

Graphical user interface, application

Description automatically generated

* 1. After hitting the submit button

A picture containing chart

Description automatically generated

**Features :**

##### 1. TEXT PRE-PROCESSING

At first we have the major goal to perform data cleaning and make the content suitable for emotion analysis.

* Remove the unwanted textual part from the message.
* Perform the natural language processing techniques.
* Bring out the well pre-processed text from the text pre-processing.

##### 2. EMOTION INVESTIGATION

Detect emotion from every word that we got from pre-processed text and take a count of it for further analytical process.

* Find the appropriate words that express emotions or feelings.
* Check the emotion category of each word.
* Store the count of emotions relevant to the words found.

##### 3. EMOTION ANALYSIS

After emotion investigation, there is the time of getting the significant output for the textual message we input earlier.

* The output will be in the form of dictionary.
* There will be keys as emotion categories and values as emotion score.
* Higher the score of a particular emotion category, we can conclude that the message belongs to that category.

**Industry Use Case Details :**

Consider as an organization, we always concern about the opinions, feedback, or improvements from the customers. What does the customer think about our product? he may be happy or sad or angry also because of the services provided by the organization you never know about it. This is the condition where text to emotion can be your savior. Here, I will discuss two real industry use cases.

## E-Commerce Industry: Customer Engagement Endpoint

Analyzing the input received from customers through various sources such as textual data from **chat-bots, logs from contact centers, emails,**etc. Tracking these tone signals can help Customer Service Managers improve how their teams interact with customers.

## Social Media Monitoring

In today’s digital world Brand Monitoring and reputation management has become one of the most important aspects of every business unit. This is where emotion analysis comes into the picture. It will help companies by allowing them: In tracking the perception of the company by the consumers, in pointing out the attitude of the consumers by giving specific details, finding different patterns and trends, in keeping a close look on the demonstration by the influencers.

**Conclusion :**

The text to emotion system that which is capable of recognizing the emotion and convert it and know the response on the products. We can know the specific details of the product so that we can improve the product that is required to the society