Statement of problem:

For years now, Artificial Intelligence and Machine Learning has been an area of great interest among Computer Science Enthusiasts and this project focuses on one of at the very important components of ML which is Natural Language Processing (NLP). The Human Language is a very complex and sophisticated form of communication and making a computer understand this is a very difficult task especially when using traditional methods of programming and data structures. Hence, a novel approach to tackle the problem has been suggested.

Purpose of the Project:

This project focuses on solving two problems of the modern society namely,
1. Cyber Bullying
2. Brand/Product Analysis
3. Categorize opinions expressed in feedback forums

Project:

The first part of the project is a sentiment analyser. Built on the 'Aylien API' using Python, the project uses Machine Learning to provide a polarity for a given query which is of three types - Positive, Negative and Neutral. If the polarity of a query is negative, it is deemed unsuitable.

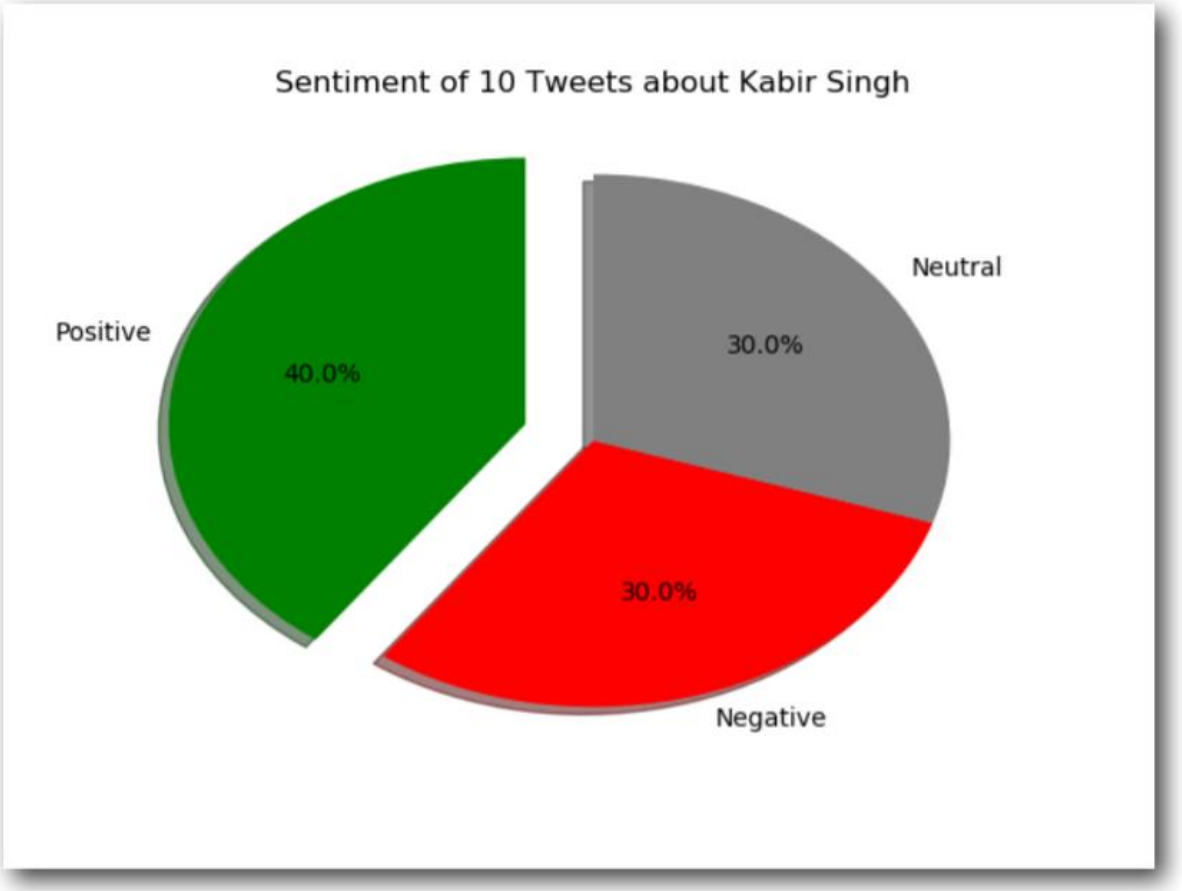
The second part of the project is for Brand/Product Analysis and is based on the previously discussed model. Here, instead of taking queries from the user, it takes data from social media platforms like Twitter, analyses them, creates CSV file and then provides a pie chart of the sentiments for the same.

CSV File:

Sentiment_Analysis_of_10_Tweets_About_Kabir Singh.csv — Open with Numbers

Tweet	Sentiment
comparing safeena and Kabir singh characters itself is totally wrong!!!! they r poles apart	negative
@KubbraSait Gaitonde is cool af! But Kabir Singh is problematic!	positive
watching Kabir Singh	neutral
@mounicareddyc @imvangasandeep @shahidkapoor What the director says as his second defense, is equally bad! He is su https://t.co/GsTJscYTij	negative
@imvangasandeep thank you sir for giving us wonderfull movie like Kabir Singh	positive
And Yes #KabirSingh has now officially overtaken #Kick and #ChennaiExpress Which Means: 1. It is the 11th Highest B https://t.co/FDaPjV937V	neutral
its not about Kabir singh movie . its about how arrogant this vanga d_ck is. his take on marriage shocked me! such men exist??	negative
My best friend always say *Larkiyon ny nahi aana janazay main kandha hum ny hi dena hy* and tbvh after watching Kab https://t.co/GDR1J3vpja	neutral
Kabir Singh top rated and real authentic movie Great acting #kabirsingh	positive
Tag a female Kabir Singh!!!	positive

Pie Chart:



Future Work Plan:

Sentiment Analyser

- One of the future work-plans for this project is its integration into web browsers. Once the program is integrated via an extension, the program can parse through each line of text on the website, check its polarity and strike out the things that are offensive (polarity= 'negative').
- One more way of ensuring a safe internet is by image analysis. An image on a website is taken in as a query and a polarity is generated which can then be checked for its content. But once again, it's a part of the future work-plan.
- One more workplan that we have is a port for Indian Language.

Brand/ Product Analyser

- We are also thinking of creating a GUI based business suite for entrepreneurs for the easy use of the software for brand/product analysis.

Feedback Form Analysis

- We are also thinking of creating a GUI based application for analyzing and inferring useful outcomes from the feedback forms.

Conclusion:

In this project, natural language processing and its applications were studied and successfully applied on a pilot scale.