**Motivation**

Being extremely interested in everything having a relation to Machine Learning, the independent project was a great occasion to give me the time to learn and confirm our interest in this field. The fact that we can make estimations, and predictions and give the ability for machines to learn by themselves is both powerful and limitless in terms of application possibilities. We can use Machine Learning in Finance, Medicine, almost everywhere. That’s why we decided to conduct our project around Machine Learning.

This project was motivated by our desire to investigate the sentiment analysis field of machine learning since it allows us to approach natural language processing which is a very hot topic actually. Following our previous experience which was about classifying music according to its emotion, we applied the same idea with tweets and try to figure out which is positive or negative.

**Methodology**   
To achieve this objective the following methodology is used:

* A thorough study of existing approaches and techniques in the field of sentiment analysis.
* Collection of news and tweets from RSS feeds from news websites and Twitter with the help of Twitter API and Tweeny.
* Using VADAR sentimental analysis package analyzes the gathered articles and tweets.
* With the help of the news-category dataset from Kaggle create and test the data model.
* Predict the news categories of the articles and tweets with the created model.

**Project Outcomes and Deliverables**

The final execution of the project will have the following outcomes:

* A working tool to gather various news articles from different sources and tweets on Twitter.
* Predict news categories.
* Score cities with positive negative and average values.
* Give ratings to cities.

**Individual Role**

**Project Mentor**

 Dr. Jayendra Barua oversees a group completing a specific task.

**Team Members**

Keshav Srivastava, Akashdeep Rawat, Astha Jain, and Aryank Sharma executed the project work.

**Roles**

Astha and Akashdeep worked on gathering RSS feed from different news sources with news headlines, date/time, and source and storing them in a MySQL database.

Aryank worked on the sentimental analysis of the gathered news articles with the use of the VADAR sentimental analysis package and produced the negative, positive and average scores.

Keshav worked on fetching tweets from Twitter using Twitter developer portal tools like Twitter APIv2, and Tweepy and did a sentimental analysis on the tweets using VADAR. He also worked on news category prediction where he used a news-category dataset and created a data model that predicts the news categories just by reading the text.

**Responsibilities:**

Delivering and presenting the project on time. Communicate between team members to divide the different roles and finish development before the deadline.