# Proposal –

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**Purpose and Description**

The purpose of the application is to allow users to search tweets containing keywords specified by the user. Results can be filtered out based on the sentiment of the tweet, allowing users to view tweets that align with their own views. Tweets will then be pulled and shown to the user, live, as they are tweeted. Tweets will also be coloured depending on their tone to give them visual differences, allowing users to quickly identify a tweets message or general sentiment. Users can also control how tweets are captured when multiple keywords are used, ranging from tweets that contain any of the keywords to only tweets that contain all requested keywords.

**Phases of implementation**

1. The API’s being used will be researched and tested.
2. A simple prototype web application will be created that uses the twitter API and allows users to search for keywords.
3. The webapp will then be packaged with Docker and tested on a EC2 webserver
4. The sentiment API (and any others that are required) will be added to the web application, to give it near complete functionality. It will then be packaged and tested again on the webserver.
5. Load balances will be tested next, with some very basic manual scaling.
6. Once manual scaling is working as expected, automatic scaling will be implemented to complete the application as per the specs.
7. Finally the code will be cleaned up, bug tested and tweaked to meet the specifications.

**Set of example use cases**

1. As a user i want to be able to search for multiple hashtags so i can see what people are saying regarding a particular topic.
2. As a user i want to be able to filter the displayed tweets by sentiment so that i can only see positive tweets.
3. As a user I want to be able to control which tweets are captured in relation to my search queries so I can see information that is more specific to my needs.

**List of service and data APIs to be utilised + short description**

1. Twitter REST API
   * The Twitter API allows for reading and writing of twitter data. It will be used for user stories all user stories.
2. Text tone API
   * The Text tone API reads text and determines the sentiment of the text. It will be used for user story 2.
   * [https://market.mashape.com/mikerlynn/text-tone-sentiment](https://l.facebook.com/l.php?u=https%3A%2F%2Fmarket.mashape.com%2Fmikerlynn%2Ftext-tone-sentiment&h=cAQEVKMf5)

**Technologies to be deployed.**

Server side:

* AWS EC2 Ubuntu server
* NodeJS
* Docker

Client side:

* HTML
* CSS
* JavaScript
* BootStrap
* Twitter BootStrap
* NLTK

Other:

* GIT