Sentiment analysis for social media (Twitter)

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1. Introduction

1.1 Purpose

The purpose of this document is to analyse and define high-level needs and features of the Sentiment analysis [2] for social media (Twitter) [3] project. This document focuses on the capabilities required by the stakeholders and the target users. The details of how this project fulfils these needs are described in following sections below.

1.2 Scope

This Vision Document applies to the Sentiment analysis for social media (Twitter), which will be developed by Ignas Usinskas a student in Carlow IT. The student will research and develop a data mining app (application) [1] for Twitter which will collect data on tweets [3] for a specific product, person, sports team etc. and will determine whether people like or dislike specified object based on positive and negative tweets. The app will be available on windows.

1.3 Definitions, Acronyms and Abbreviations

App – application.

Sentiment analysis – is a use of natural language processing, text analysis and computational linguistics to identify and extract required information in source materials.

Twitter – online social networking service that allows users to send and read short messages.

Tweet – a short message (140 characters) used in twitter.

1.4 References
1. App - https://en.wikipedia.org/wiki/App.
2. Sentiment analysis - https://en.wikipedia.org/wiki/Sentiment_analysis.
3. Twitter - https://en.wikipedia.org/wiki/Twitter.

2. Positioning

2.1 Business Opportunity

Knowing what users think about a specific product or brand can be very useful in marketing and business, especially when businesses want to make a product that is desirable by everyone so to maximize sales. This app will help by providing a calculated feedback about a specific product, person, sports team etc. based on user's opinions on Twitter. This app will be able to search and extract relevant information to determine whether a tweet is appositive negative or neutral. This will help companies to improve their products and decide if that specific product is worth continuing.

2.2 Problem Statement

The problem of	reading and reviewing tweets
affects	Twitter users and companies
the impact of which is	time consumption of reviewing and evaluating

	tweets
a successful solution would be	a fast and flexible app that would extract relevant information from tweets on a specific product, person, sports team etc. to determine whether people like, dislike or are neutral about that specified object. This app would use natural language processing, text analysis and computational linguistics to identify and extract required information from tweets to determine whether the tweet is positive, negative or neutral. This app would save a lot of time and effort as users would not have to read every tweet to see what people think.

2.3 Product Position Statement

For	Twitter users
Who	Require quick people opinions about a specific product, person, sports team etc.
Sentiment analysis for social media (Twitter)	Is a software product
That	provides a quick search and evaluation of tweets towards a specific product, person, sports team etc.
Unlike	having to read and review tweets by yourself
My product	Uses natural language processing, text analysis and computational linguistics to identify and extract relevant information to determine whether tweets a specific tweet is positive, negative or neutral sparing users to have to read and evaluate tweets themselves.

3. Product Overview

3.1 Summary of Capabilities

Customer Benefit	Supporting Features
Convenient, flexible access to the app	wireless access
App responds quickly	
Data mining	the app uses data mining techniques to acquire required tweets from Twitter
Sentiment analysis	the app uses natural language processing, text analysis and computational linguistics to analyse acquired data and determine whether tweets are positive, negative or neutral to the object.
Output results	when everything is analysed – app outputs the results to the user.

3.2 Assumption and Dependencies

The app requires internet connection to operate, if internet connection is not present – the app will not be able to search for, and analyse tweets.

3.3 Cost and Pricing

The app is entirely free.

3.4 Licensing and Installation

The application is owned by the Institute of Technology Carlow.

There is no installation as the application runs in web browser.

4. Product Features

4.1 User interface

This application will provide a search field where user inputs their queries, search button that needs to be pressed for search to be executed and results screen where all relevant tweets with analysed information are is displayed.

5. Limitations

- Internet – The application will require internet connection to work. With no internet connection Twitter will not be accessed and search will not be executed.
- Time limit – This app will be built by one person over 18 weeks of time period. Some features might not be implemented.
- Learning curve – the student hasn't done anything like this before so this will be a learning curve.