

User Manual  
Sentiments Analysis with Twitter  
Team Jazz Men

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Table 1: Revision History

Description of Changes	Author	Date
Created First Draft	Meet Pandya	February 22, 2017
Created Functionalities and Operational Information	Anagh Goswami	April 6, 2017
Edited for Final Revision	Meet Pandya	April 7, 2017

# 1 Introduction

## 1.1 What is Sentiments Analysis?

Social Media Sentiment Analysis or just Sentiment Analysis is an engine that determines feelings towards certain topics using social media (e.g. Twitter). Sentiment Analysis will generate scores depending on the sentence structure and choice of words used. Sentiment Analysis utilizes the Alchemy Language API with various social media API and is then presented on a web page to allow users to view the general opinion on various categories (e.g. athletes, schools, restaurants, etc.)

For background information regarding the Alchemy Language API, refer to: <https://alchemy-language-demo.mybluemix.net/>

## 1.2 Objectives of User Manual

This user manual provides a simple overview on how to use the Sentiment Analysis web application which is found on: <https://jazzmen-capstone.herokuapp.com/>. It also provides a guideline on troubleshooting in case of an error occurring.

## 1.3 System Requirements

### 1.3.1 PC Requirements

Below are the different Operating Systems compatible for Sentiments Analysis

- Windows OS (7+)
- Mac OS (10+)

- Linux OS (Ubuntu, Xbuntu, Mint, Elementary)

### **1.3.2 Browser Requirements**

Since Sentiments Analysis is an online web application, essentially it is accessible on browsers listed below on any Computer with Internet Connection.

- Google Chrome (54+)
- Microsoft Edge
- Microsoft Internet Explorer (11+)
- Mozilla Firefox (50+)
- Safari (9+)

## **2 Functionalities and Operational Information**

### **2.1 Categorized Functionalities**

#### **2.1.1 Homepage**

User arrives at the Sentiment Analysis homepage and is welcomed with textual information explaining the idea of Sentiment Analysis. It also provides a quick overview on how to operate the home page with instructions along every step of the way as users scroll through (Figure 1 and Figure 2).



Figure 1: Homepage

## Using Modern Day Technology

By combining the power of Social Media , Natural Language Processing and Sentiment Analysis , we can give you a real look at what people are saying about your organization.

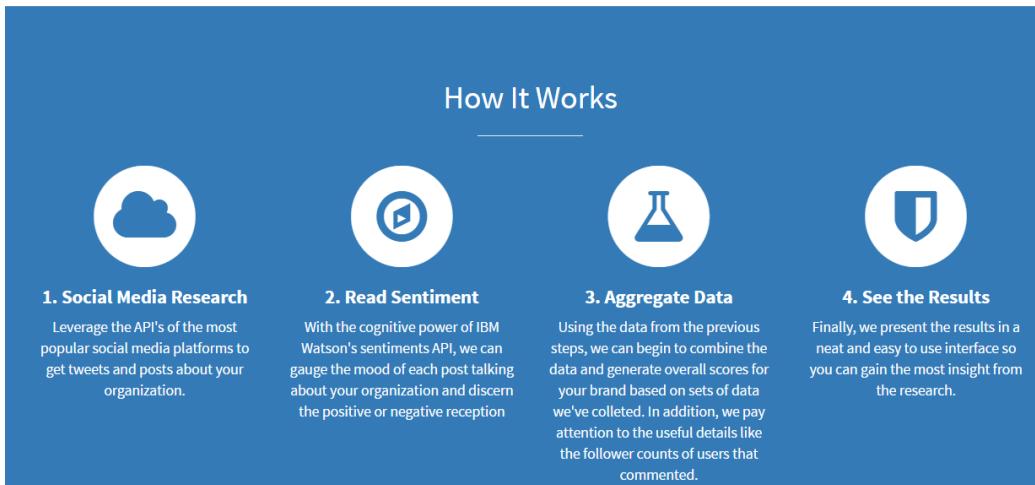


Figure 2: How it Works

### 2.1.2 Samples Section

As the user scrolls further down the web page, it is designed to lead the user's attention to the a "Samples" section for the Sentiment Analysis web application (Figure 3). It currently includes four categories: TV Shows, Universities, Athletes, and Restaurants. Once a user selects any one of these categories, the webpage will display four different items related to the category (contents of sample categories are shown in Figure 4,5 and 6). Each item can be clicked on, and the Sentiment Analysis web application will display a report for said category with an overall score as well as individual tweets.

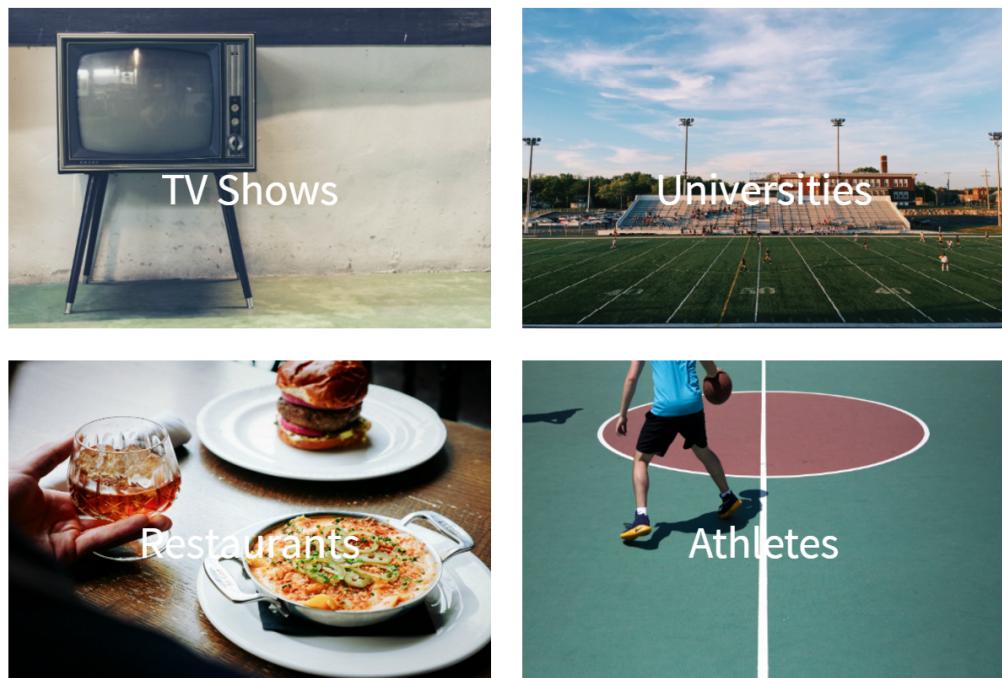


Figure 3: Samples Section

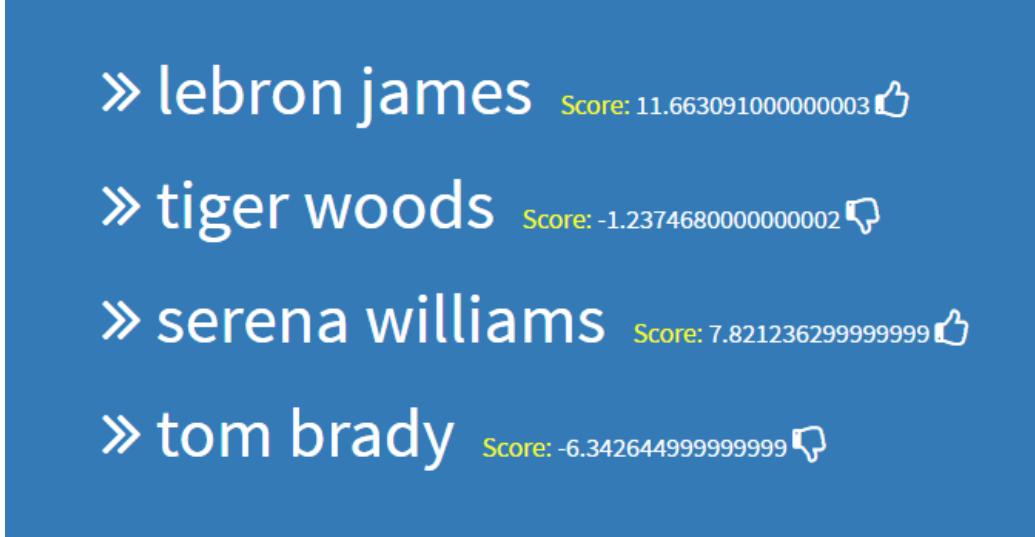


Figure 4: Sample Category: Athletes

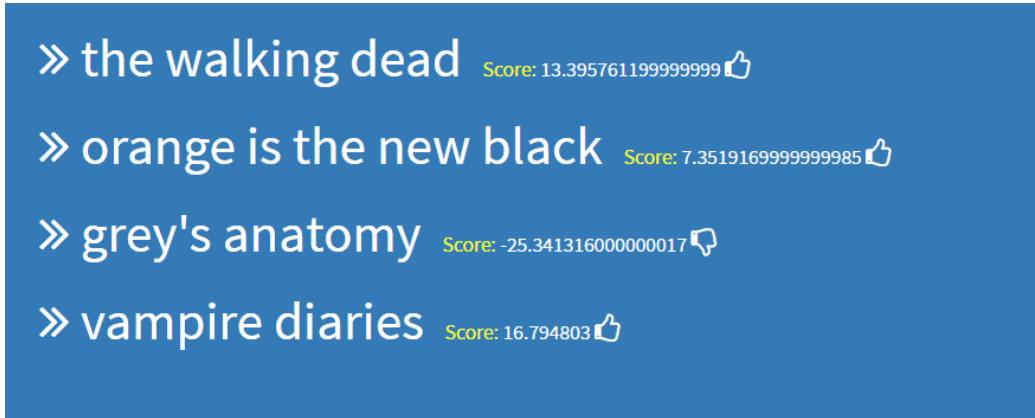


Figure 5: Sample Category: TV Shows



Figure 6: Sample Category: Restaurants

### 2.1.3 Tweet Data

Once a user clicks a category, the webpage expands into a table to display a list of tweets with various scores ranging from positive to negative (Figure 7). There are two tables that are displayed - one table includes the highly positive tweets and the other for the highly negative tweets. Each table has three columns: the user's Twitter handle, their follower count, and the tweet.

▽ lava pizza			
Score: 10.157238600000001			
Positive tweets: 42			
Negative tweets: 33			
Neutral tweets (Not counted): 25			
Most Impactful Positive Tweets			
User	Followers	Tweet	Score
1 Abbey_Rhode	82,248	Omg I got pizza and lava cake and I am so happy.	0.847712
2 katalogpromosi	42,272	DOMINO'S PIZZA SWEET TREATS! BUY 2 Chocolate Lava cakes ONLY for Rp.35.000 https://t.co/7MOMOPyvs	0.791603
3 katalogpromosi	42,272	DOMINO'S PIZZA SWEET TREATS! BUY 2 Chocolate Lava cakes ONLY for Rp.35.000 https://t.co/7MOMOPyvs	0.791603
4 katalogpromosi	42,272	DOMINO'S PIZZA SWEET TREATS! BUY 2 Chocolate Lava cakes ONLY for Rp.35.000 https://t.co/7MOMOPyvs	0.791603
5 katalogpromosi	42,272	DOMINO'S PIZZA SWEET TREATS! BUY 2 Chocolate Lava cakes ONLY for Rp.35.000 https://t.co/7MOMOPyvs	0.791603
6 katalogpromosi	42,272	DOMINO'S PIZZA SWEET TREATS! BUY 2 Chocolate Lava cakes ONLY for Rp.35.000 https://t.co/7MOMOPyvs	0.791603
7 shalukars625	2,778	Celebrate Valentine's with Pizza Hut! 2 Lava Cakes FREE when you buy a Large Pan Pizza or Grand Dipper with an Appetizer. தினாங்குட்டி நீண்டகாலம்!	0.843551
8 chethyaaaa	2,353	RT @shalukars625: Celebrate Valentine's with Pizza Hut! 2 Lava Cakes FREE when you buy a Large Pan Pizza or Grand Dipper with an Appetizer.	0.786551
9 ReglaKczaz	2,147	Made chocolate lava cake and garlic bread pizza ready to watch RHWBH #SingleLife #ValentinesDay	0.621691
10 The_Firepod	1,376	Introducing The Firepod pizza oven, griddle & hot lava stone in 1 versatile & stylish piece of kit! #SBS... https://t.co/LPVgbOthW8	0.880383
Most Impactful Negative Tweets			
User	Followers	Tweet	Score
1 jacton35	13,022	RT @Vtacular: I call bullshit on these pizza rolls...there's too much hot lava and not enough pizza	-0.896068
2 FlavaFlavswife	4,033	A cigarette, pizza and red bull for breakfast. You can't tell me this guy isn't pipin' lava	-0.435196
3 AmisoSweet	3,793	Domino's got some good deals . Pizza Hut is sucks they only give free lava cake for large pan pizza. I mean who the fuck eat lava cake . Ew	-0.385384
4 Lola_Just_Lola	3,428	RT @Vtacular: I call bullshit on these pizza rolls...there's too much hot lava and not enough pizza	-0.896068
5 virtualkidroya	3,001	Idk if I'm craving pizza or McDonalds or a chocolate lava cake ugh	-0.748316
6 Bevels333	2,319	RT @Vtacular: I call bullshit on these pizza rolls...there's too much hot lava and not enough pizza	-0.896068
7 DenversLauregui	1,233	LMAO I WON A VALENTINE MENU (2 pizza's, 2 lava cakes and a bottle of wine) BUT IM SINGLE AS FUCK RIP	-0.878388
8 expectnotmuch	896	RT @Vtacular: I call bullshit on these pizza rolls...there's too much hot lava and not enough pizza	-0.896068
9 jhf006	817	RT @ChastonLaCaze: Ever waited 52 hours for your pizza rolls to safely cool, but still came away with 3rd degree burns from the lava fillin...	-0.314746
10 Golden_Child	708	When your pizza rolls finally come to have cooled down, then you bite into it. Saint Helen's freakout lava and it a ... https://t.co/7TkmSEfowr	0.347348

Figure 7: Sample Tweet Data

## 2.2 Operational Information

### 2.2.1 Prerequisites

- Able to open and use a web browser on the Operating Systems specified in the "System Requirements" section
- An internet connection to access the website

### 2.2.2 Steps to use the Sentiments Analysis Web Application

Open the web browser and visit <https://jazzmen-capstone.herokuapp.com/> to visit the home page. To view the sample data, simply scroll down from the home page and click on the categories presented as shown in Figure 3.



Figure 8: Menu

If you wish to make a customized keyword search, click on the menu button on the top right of the web page to open the menu, as shown in Figure 8. Select the option for customized searches and it will navigate you to the Custom Search page. The Menu tab on the top right of the webpage is visually easy to spot and once clicked, the menu is expanded into the list of items as seen in Figure 8.

Once on the custom search page which can be seen in Figure 9, you have to register first with a username by writing it in the username field and the password in the password field and then clicking the "Register" button. After this you can login by using your account credentials in the appropriate text fields and then clicking the "login" button.

A screenshot of a login/registration form. The form has a blue header with the word "Username" and a white input field containing "test\_user". Below that is a blue header with the word "Password" and a white input field containing "\*\*\*\*". At the bottom are two buttons: "Login" and "Register".

Figure 9: Login/Registration Page

Once you have logged in, you are now able to start your customized search. Enter your keyword into the field and click the search button. An example is shown in Figure 10.

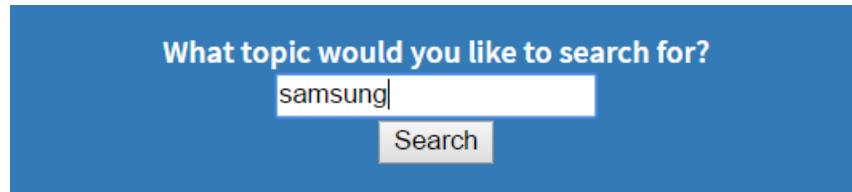


Figure 10: Custom Search Page

Your search results will be displayed in an easy to read format. The results view can be switched between bubble view shown in Figure 11 or the Tables view shown in Figure 12. Since the web application stores previously searched data, the historical data can be refreshed by clicking the "Refresh Data" right under the Results title, as seen in Figure 12.



Figure 11: Bubble View

Most Impactful Positive Tweets			
User	Followers	Tweet	Score
1. LewisTheCockato	2,252	RT @SamsungSLife: Live smarter with #SamsungConnect. Control your smart devices and appliances, right from your Galaxy phone. <a href="https://t.co/CoOOGzGzMBH">https://t.co/CoOOGzGzMBH</a>	0.811954
2. bradster93	1,781	Finally got mine yesterday. Have mixed feelings about buying another Samsung, cause of the locked bootloaders. <a href="https://t.co/eoCCGzGzMBH">https://t.co/eoCCGzGzMBH</a>	0.78935
3. ECreshillUK	632	#BOGOF #Sale Mobile Smart Phone Stand For All Brands iPhone Samsung Great Gadget <a href="https://t.co/EHRQRVQAC8">@eBay"&gt;https://t.co/EHRQRVQAC8</a> @eBay	0.855517
4. BoopTheCat	572	<a href="https://t.co/ovYVpdff6">https://t.co/ovYVpdff6</a> is giving an awesome #Samsung #GalaxyS8 mobile. Participate NOW! @shubham_neru #Giveaway #SA <a href="https://t.co/0sXXXK52a">https://t.co/0sXXXK52a</a>	0.613726
5. CometMonkey_	475	RT @SamsungSLife: #SamsungHex turns any space into a workspace. Connect your phone to the Dex Station & get to work. #SamsungSmartLife <a href="https://t.co/7Gdm15QfI">https://t.co/7Gdm15QfI</a>	0.263015
6. DavidFoyn	279	RT @MoMo_SanDiego: Well I have a Samsung and it's still leaking up and even cutting on me. <a href="https://t.co/7f7f1mzq0PL">https://t.co/7f7f1mzq0PL</a>	0.475886
7. galliumoutfitn	254	Samsung Galaxy S6 Screen Protector Made with Ultra Clear PET Plastic Give You Protection From <a href="https://t.co/7f7f1mzq0PL">https://t.co/7f7f1mzq0PL</a>	0.568154
8. freydasakes	231	RT @ECreshillUK: #BOGOF #Sale Mobile Smart Phone Stand For All Brands iPhone Samsung Great Gadget <a href="https://t.co/EHRQRVQAC8">@eBay"&gt;https://t.co/EHRQRVQAC8</a> @eBay	0.849178
9. nc4f	187	Best Belt (Upgrade)@Azymate Fashion Running Belt Stylish Travel Money Belt with Zipper and Smartphone Pocket <a href="https://t.co/1d2qgIB4Lm">https://t.co/1d2qgIB4Lm</a>	0.60411
10. sales_trudy	77	RT @ECreshillUK: #BOGOF #Sale Mobile Smart Phone Stand For All Brands iPhone Samsung Great Gadget <a href="https://t.co/EHRQRVQAC8">@eBay"&gt;https://t.co/EHRQRVQAC8</a> @eBay	0.849178

Most Impactful Negative Tweets			
User	Followers	Tweet	Score
1. jspring98a2	13,875	Shout out to Samsung for finally reimbursing my Exyno Note 7 return.. I missed my \$900 these last 5 months! <a href="https://t.co/Gpxnlr1NsY">https://t.co/Gpxnlr1NsY</a>	-0.709468
2. BugattiMusicOn	13,395	Samsung Attacks DMN for Suggesting They Manufactured Those Exploding Headphones <a href="https://t.co/30xWQ6qyV">https://t.co/30xWQ6qyV</a> <a href="https://t.co/Z1s7uIzIe">https://t.co/Z1s7uIzIe</a>	-0.546283
3. 3drockhome	7,946	This might be the first look at Samsung's follow-up to the exploding Galaxy <a href="https://t.co/FGCSlykNzv">https://t.co/FGCSlykNzv</a> #Rumor #Leaks <a href="https://t.co/Cp4akC40FO">https://t.co/Cp4akC40FO</a>	-0.864239
4. LawGro	3,721	Samsung Chief trial lawyer flatly denies charges <a href="https://t.co/RMAsLBwEfW">https://t.co/RMAsLBwEfW</a> #lawyer	-0.497429
5. Hawke525	854	RT @RerezTV: You may see this image floating around of a burnt Nintendo Switch from a blown up battery. This is fake it's actually a Samsung	-0.675836
6. Bigng480	787	Finally retired my #Lumia phone. Bought a Samsung S7. Too much stuff was dropped by Microsoft... Ruined a brilliant phone.	-0.680524
7. Glass_Eaters	381	RT @RerezTV: You may see this image floating around of a burnt Nintendo Switch from a blown up battery. This is fake it's actually a Samsung	-0.675836
8. Trinitus	341	RT @RerezTV: You may see this image floating around of a burnt Nintendo Switch from a blown up battery. This is fake it's actually a Samsung	-0.675836
9. Scopher_	212	RT @RerezTV: You may see this image floating around of a burnt Nintendo Switch from a blown up battery. This is fake it's actually a Samsung	-0.675836
10. gopiz_world	122	View through Samsung Note 4. View within. Taken by Google Pixel. No filter was required! <a href="https://t.co/nQIssoSF">https://t.co/nQIssoSF</a>	-0.370155

Figure 12: Table View