

# Sentiments Analysis R-3.5



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## 1. About this Guide

### 1.1. Document History

Product Version	Date (Release date)	Description
BDB Sentiment Analyzer 1.0	June 9 <sup>th</sup> , 2015	First Release of the document
BDB Sentiment Analyzer 2.0	February 18 <sup>th</sup> , 2016	Updated document
BDB Sentiment Analyzer 2.5	Nov 9 <sup>th</sup> , 2016	Updated document
BDB Sentiment Analyzer 3.0	Aug 31 <sup>st</sup> , 2017	Updated document
BDB Sentiment Analyzer 3.2	February 2 <sup>nd</sup> , 2018	Updated document
BDB Sentiment Analyzer 3.5	April 15 <sup>th</sup> , 2018	Updated document

### 1.2. Overview

This guide covers:

- Introduction to the BDB Sentiment Analyzer App
- Steps to extract sentiments out of a text or verbal data
- Description of the various charts

## 1.3. Target Audience

This document aims at business professionals who use BDB Sentiment Analyzer to extract sentiments out of their business data.

## 2. Introducing the BDB Sentiment Analyzer

## 2.1. Introduction

The BDB Sentiment Analyzer is a text analyzer that chases words with positive or negative connotation. It then applies Natural Language Processing and machine learning algorithms to determine the exact correlation between expressive scripts and their social implementation. It is equipped with ANEW dictionary ("Affective Norms for English Words"), a set of normative emotional ratings for many words in the English language. This set of words have been rated in terms of pleasure, activation, and dominance to create a standard terminology for use in studies of emotion and attention. Subject matter for this app can be verbal data from news articles, blog posts, product reviews, Facebook comments, Tweets, and manually entered texts.

## 2.2. Prerequisites and Supported Devices

- $\circ$  A browser that supports HTML5
- Operating System: Windows 7
- Basic understanding of the BDB Server



## 3. Getting Started with the BDB Sentiment Analyzer

BDB Sentiment Analyzer is a plugin application provided under BDB Platform.

- i) Open BDB Enterprise Platform Link: <u>http://apps.bdbizviz.com/app/</u>
- ii) Enter your credentials to Login.
- iii) Click 'Login'.

Welcome to Big Data BizViz (BDB)	Decision Platform
Big Data Pipeline Framework	
Dashboard Designer	22 could
ETL (Self-Service Data Preparation)	Ernan
Geospatial Analysis (Location Intelligence)	Password
Predictive Analysis	Forgot password?
Play (Beta Release)	Enterprise
Self-Service BI (Business Story)	Login
Social Media Browser	
Sentiment Analysis	
Survey	Copyright © 2015-2018 BDB (RizViz Technologies Pyt Ltd)

iv) Users will be redirected to the BDB Platform homepage.



- v) Click on the **'User Menu'** to display a list of all the available plugins.
- vi) Select the 'Sentiments' plugin from the list.





vii) Users will be redirected to the Sentiment Analyzer landing page.



- viii) Click the 'Sentiment Analyzer' option on the top left of the page.
- ix) Users will be redirected to the Sentiment Analyzer home page.



Decision Platform			■ ?	-
Sentiment Analyzer				
List Upload Input	Sentiment Heat Map Tag Cloud Breakdown Timeseries Reviews			<b>Ø</b>
Excel CSV Search SL No File Name No data available in table	Active Tense Alert Nervous Excite	R	teviews (0)	
Showing 0 to 0 of 0 entries	Upset Unpleasant		Happy Pleasan	t
	Sad Unhappy	Sen	Contented	
	Depressed Relaxe Bored Calm Subdued	ed	()	

## 3.1.1. Forgot Password Option

Users are provided with a choice to change the password on the Login page of the platform.

- i) Navigate to the Login page
- ii) Click 'Forgot Password?' option

	BBB	
	Decision Platform	
🗹 Email		
Password		
		Forgot password
Enterprise		-
	Login	

- iii) Users will be redirected to a new window
- iv) Provide the email id that is registered with BDB to send the reset password link
- v) Click 'Continue' option





vi) Users will be redirected to select a space and click the 'Continue' option

Having trouble signing in?
To reset your password, enter the email address you use to sign in to BizViz. This can be your email address associated with your account.
Select Space
Select Space
CONTINUE

vii) A notification appears stating that the reset password link has been sent to the registered email





- x) Set a new password
- x) Set a new password
- xi) Confirm the newly set password
- xii) Click the 'RESET PASSWORD' option

Reset Passwo	ord
You've confirmed owners	ship of the BizViz Account, Reset your password now to regain access.
New Password	
New Password	
Confirm New Password	
Confirm New Passv	vord
RESET PASSWORD	

xiii) The password is reset for the selected BDB account

## 4. Options

This section describes 3 options to read text data from the data source.

List: To display the available data files in Excel or CSV format



- Upload: To upload data files in Excel or CSV format
- Input: To insert the verbal data manually

## 4.1. List

This option displays all the uploaded Excel and CSV files that can be used as a data source for the Sentiment Analyzer.

List	Upload Input
Excel	Ocsv
	Search
SL No	File Name
1	2013 Survey Comments by Division.xlsx
2	TextAn alyzerTemplate (1).xlsx
Showing 1 to	o 2 of 2 entries

#### Note:

- a. Use 'Search' box to search a specific file from the given list
- b. A list of all the existing Excel files will be displayed by default

#### 4.1.1. Opening an Excel File

- i) Navigate to the Sentiment Analyzer home page.
- ii) Click 'List.'
- iii) A list of all the existing/uploaded Excel files will be displayed (by default.)
- iv) Select an Excel file from the list.

Sentiment Analyzer								
List	Upload Input							
Excel O CSV								
Se	arch							
SL No	File Name							
1	2013 Survey Comments by Division.xlsx							
2	TextAnalyzerTemplate (1).xlsx							
3	TextAnalyzerTemplate (CSV).xlsx							
Showing 1	to 3 of 3 entries							

v) A list containing sub-files will be displayed.



- vi) Select a sub-file from the list.
- vii) The file content will be displayed through a chart (on the right side of the screen).

t		Upload Inpu	ut		Sentiment Heat Map	Tag Cloud	Breakdown	Timeseries	
Ex	cel	Ocsv		+					Reviews
SL No	Id	File Name		Dele					Reviews (12
1	20	Everyone Included	<b></b>		9 Nervous	Tense	Active Aler	t Excited	
2	21	Independent Learners	â		Stressed Upset				Elated Happ
3	22	Internaltionals on ISB	â		Unpleasant	hege of			Plea
ŧ	23	Changes for ISB	â		Sad Unhappy		-	•	Conten Serene
5	24	HS	â		Depressed	Bored	Calm	Relaxed	

## 4.1.2. Export Options for an Excel File

This section explains 3 export options provided for an Excel file.

#### 1. Export a Report as PDF

- i) Select an Excel File from the list.
- ii) A list of all the worksheets will be displayed.
- iii) Click the 'Export report as pdf' option
- iv) The various charts of all worksheets will be exported as a pdf report.

#### 2. Export Data in Excel

- i) Select an Excel File from the list
- ii) A list containing sub-files will be launched
- iii) Select a subfile

iv) Click the 'Export data in excel' option

V) The text data will be exported into an Excel file.

#### 3. Export Data in CSV

- i) Select an Excel File from the list
- ii) It will launch a list of available sub-files
- iii) Select a subfile

iv) Click the 'Export data in CSV' option <sup>1</sup>
v) The text data will be exported into a CSV file

### 4.1.3. Opening a CSV File

- i) Navigate to the Sentiment Analyzer app screen
- ii) Click 'List'
- iii) It will display a list of all the existing Microsoft Excel files (by default)
- iv) Click the 'Check Box' to select 'CSV' option
- v) A list containing all the CSV files will be launched



- vi) Select a CSV file from the list
- vii) The file content will be displayed through a chart (on the right side of the screen)

Li	st	Upload Input		Sentiment	Heat N	1ap Tag	Cloud Bre	akdown Ti	meseries	Reviews		40 T
	xcel	⊙ csv									Reviews (609)	
SL No	ld	File Name					Tense	Active	Alert			
1	1	TextAnalyzer1.csv	â		Stressed	Nervous				Excited	Sated	
2	37	TextAn alyzerTemplate.csv	ŵ	Upset	•		•				Сарру	
3	38	TextAnalyzerTemplate.csv Tue Mar 15 17:53:30 IST 2016	â	Unpleasa	nt				1		Pleasant	
Showi	ng 1 to	3 of 3 entries		Sad			•				Contented	
					Unhappy			-			Serene	
						Depressed	Report	-	Calm	Relaxed		

Note: Extracted sentiments will be displayed via the Sentiment chart (by default).

## 4.1.4. Export Options for a CSV File

This section explains 2 export options provided for a CSV file.

- 1. Export Data in Excel
  - i) Select a CSV file from the list.
  - ii) Click the 'Export data in excel' option
  - iii) The file data will be exported into an Excel file.

#### **2.** Export Data in CSV

i) Select a CSV file from the list.



iii) The file data will be exported into a CSV file.

#### 4.2. Uploading a File

This section explains how to upload an Excel or CSV file for Sentiment Analyzer.

- i) Navigate to the BDB Sentiment Analyzer homepage.
- ii) Click '**Upload**'.



- iii) Browse a file from the system.
- iv) Click 'Open' to upload the file.



Sentiment Analyzer		
List Upload Input	Sentiment Heat Map Tag Cloud Breakdown Timeseries Reviews	•
BROWSE	Open Z   O -   Image: Comparison of the state of th	
LEXCEL TEMF	Organize • New folder Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder   Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder   Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder   Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder   Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder   Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder   Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder   Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder   Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder   Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder Image: Constraint of the folder   Image: Constraint of the folder Image: Constraint of the folder <td< td=""><td>nt</td></td<>	nt
	Documents Updating Survey UG Contented   Music File folder Serene   Videos Music Serene   Videos Music Relaxed	I
	File name: TestAnalyzer	

v) A message will pop-up to assure that the selected file has been uploaded.



Note: Click the 'Download' option is to download Microsoft Excel and CSV templates.

## 4.3. Input: Inserting a Text Block

- i) Navigate to the BDB Sentiment Analyzer homepage.
- ii) Click 'Input'.
- iii) Enter a text comment manually in the 'Input' box.
- iv) Click the 'SHOW ALL TEXT' option.
- v) Inserted comment/text will be displayed in a Sentiment chart.

Sentiment Heat Map Tag Cloud Breakdown Timeseries Reviews	Ø 🗎
P Tense Active Alert	Reviews (4)
Stressed	Elated
Upset	Нарру
Unpleasant	Pleasant
Sad	Contented
Unhappy	Serene
Depressed Relaxed Calm	a
T Subdued	
	Sentiment Heat Map Tag Cloud Breakdown Timeseries Reviews

Note: Sentiment Chart opens by default when clicking on 'SHOW ALL TEXT.'



## 5. Charts

This section explains various charts.

## 5.1. Sentiment Chart

The Sentiment Chart uses multidimensional scaling to position 20 emotional states, with '**pleasure**' plotted along the horizontal axis and '**activation**' along the vertical axis. It displays all the individual reviews in the form of circles.

The following parameters reveal significant information about the review sentiment:

- **Colour:** Overall valence or pleasure of the review is presented through the color. All the pleasant reviews are in green color and unpleasant in red.
- **Brightness:** Overall arousal of the review is displayed through the brightness of the circle. Active reviews are brighter, and subdued reviews are darker when compared.
- Size and Transparency: These two measures are to assure the assessment of individual review sentiment. More confident sentiment estimations are presented through the bigger size and less transparency of the circles.



Hover the mouse over a review circle to reveal its body. Click on any review to generate a dialog box displaying the review details with a day, date, and time. ANEW dictionary terms in a review will be highlighted in Italics. It may open more than one dialog box while clicking on the dense areas (with more circles). The opening of more dialog boxes indicates that all the opened reviews carry either similar words or sentiments.

## 5.2. Heat Map Chart

The Heatmap chart displays various sentiment regions each containing some amount of reviews in it. It highlights dark red regions with many reviews and light blue regions with only a few reviews.



The emotional scatter-plot is subdivided into an  $8 \times 8$  grid of bins representing a one-unit step in pleasure and arousal. The number of reviews falling within each bin is calculated and displayed using a specific color:

- Red colored bins contain more reviews than average
- Blue colored bins contain fewer reviews than average
- White colored bins contain no reviews



Stronger, more saturated colors lie farther from the average. Hover the mouse over a bin to know the number of reviews included in the bin.

## 5.3. Tag Cloud

The tag cloud displays frequently occurred terms. It uses the following parameters to reveal sentiments out of each term:

**Size**: Size of a term indicates how often it occurs over all the reviews. Terms mentioned in large size occur more frequently compared to the terms that are small in size.

Colour: Each term is colored based on the sentiment that it reveals/based on the revealed sentiment.

Four shades of colors are used to indicate different sentiments:

- Relaxed terms in dark green color
- Happy terms in a lighter shade of green color
- Unhappy terms in dark red color
- Upset terms in a lighter shade of red color

BR	

Senti	ment	Heat Map	Tag Cloud	Breakdown	Timeseries	Reviews	× -
11	0	dia gnosed	тејеска отопот	ла шиту отово <sub>def</sub>	fiant judenkl	bitser bothered happiest detected. $R^{\rm tanks}$ bursting tomorrow dirly _aspectations ways dehumanised ${}^{\rm Max}$	· .
	dem	ented pipcora popul jolie	m peuross like	ovie	raded disz bled reported	demoralized degreeced finish job defective loved start pick smallest demotivated wedas dependent full h	nifah
8.	queen herrey dislike	dictated carefully desolate essement httpst bunch made , m	deep banging deluded collegaficaisto jealous leas all painpunishment film	unbtie legal 'guess screen d <sub>brillianturaps</sub> scared cold cinematography affe	play slovenisit air comp mystified <sub>dark</sub> pm ct work https:comrbifyhte	vo ly demanding denoted vying longer motival data directionies damaged ; bag defamed vin liked f <sup>all</sup> run folks progress quarreleone devoid extors unruly fault dated featoer possibly handled population despers ly fattionic avecause words country <sup>1</sup> 10 political book hate <sub>gaugenee</sub> https://orona	nazed ns įskin
6.0	dammed	horrible rea	1 cast osha defeated d	eserted night devalue	<sub>d cataracts</sub> charact	ers jees at importance found judged   big POOF performance expectation   descatable fr	eaky
3.		walked jwifes order fili	back tim	es <sub>movement</sub> wa	lls <sub>report makes</sub> exj	berience joyless definitions match intellectually bad Lift 7 o point	at
	g	rouped dropp	ed <sub>fafghfjfgjag bother</sub>	demeaned months ppl ; ex	cellent <sub>dug dozen</sub> im	dogs charsum accused action seffects defauseless dejected diabeliare toget any	e
1		not	despised a boolutely inc	, lia murdering 'lied intende	d expected very des	airing ranverofficial evil climate modi hazard possibilities lot siming property depraved	

Hover the mouse over a term to reveal 'Lift' and 'Confidence' (frequency) count.

## 5.4. Breakdown Chart

The Breakdown chart displays a total number of reviews through different categories of a pie chart. Pleasant reviews are mentioned in green color and unpleasant reviews in red. All the reviews are split into four parts as per the revealed sentiments; each part is indicated through a different shade of color:

- Relaxed reviews in dark green color
- Happy reviews in a lighter shade of green color
- Unhappy reviews in dark red color
- Upset reviews in a lighter shade of red color





Hover the mouse over a pie to see the total number of reviews in that section.

### 5.5. Time Series Chart

The Time Series Chart uses column chart with slicer to display different reviews within the chosen range of time. The user can select a specific period by using a menu that is provided at the top. A dragger is provided below the chart to drag deep into the time slots when a wide range of time is chosen. The x-axis in the chart shows date and time for the collected reviews while Y-axis indicates total review counts.

Column slicer reveals sentiments by using a different shade of color as described below:

- Relaxed reviews in dark green color
- Happy reviews in a lighter shade of green color
- Unhappy reviews in dark red color
- Upset reviews in a lighter shade of red color



Sentiment	Heat Map	Tag Cloud	Breakdown	Timeseries	Reviews			<b>a</b>
1w 2w 1m	3m 6m 1y	2y A11						=
10								
8								
6						14 Aug 2015 1	2:45	
						Upset	2	
4	_					Unhappy	0	
						Нарру	8	
						Relaxed	0	
2								
		14. Aug 10:0	0					

Hover the mouse over a column to see review details.

## 5.6. Review List

The review list contains body of a review, day-date-time for a review, username, overall valence 'v,' overall arousal 'a,' and 'delete' option. ANEW terms are highlighted in bold and colored either in green or red as per the suggested sentiments. The review list can be arranged in ascending or descending order by clicking on the column header. The user can avail term specific review list by inserting a term in the search box.

Sentiment Heat Map	Tag Cloud Breakdown	Timeseries R	eviews			×
Show 10 • entries			Search			
Review	Date		User	v	a	Delete
	Thu Oct 15 2015 11:48:28 GMT+0	530 (India Standard Tim	e) a			â
	Thu Oct 15 2015 11:48:28 GMT+0	530 (India Standard Tim	e) a			â
good #test	Thu Oct 15 2015 11:48:28 GMT+0	530 (India Standard Tim	e) b	7.47	5.43	â
good #test2	Thu Oct 15 2015 11:48:28 GMT+0	530 (India Standard Tim	e) a	7.47	5.43	â
HD display and <i>good</i> camerathe one plus one is in my list	Thu Oct 15 2015 11:48:28 GMT+0	530 (India Standard Tim	e) a	7.47	5.43	â
#test abc	Thu Oct 15 2015 11:48:28 GMT+0	530 (India Standard Tim	e) b			â
Showing page1of 61		Previous 1	2 3	4	5 61	Next



## 6. Signing Out

To log out from the Sentiments plugin users need to sign out from the BDB Platform. The following steps describe how to log out from the BDB Platform.

- i) Click the 'User' icon 😌 on the Platform homepage
- ii) A menu appears with the logged in user details
- iii) Click the 'Sign Out' option



iv) Users can successfully log out from the BDB Platform

Note: Clicking on 'Sign Out' will redirect the user back to the 'Login' page of the BDB platform.