

IBM Watson Superclass:

Build & Deploy Models
w Jupyter Notebooks

IBM Cloud Made Simple

Name + Pronouns


Title/Company/Program

Where You're From/Joining From

Something You Love

Quirk: Something that's uniquely weird or
different about you

`ibm.biz/watson_superclass_three_slides`

link to this slide 

[developer.ibm.com/exchanges/data/all/sentiment-
composition-lexicons](https://developer.ibm.com/exchanges/data/all/sentiment-composition-lexicons)

IBM Debater Notebook & Dataset 🙌

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1. Account information

Email



Password



Next



2. Verify email

3. Personal information

Create account



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Jenna Ritten
Developer Advocate @ IBM

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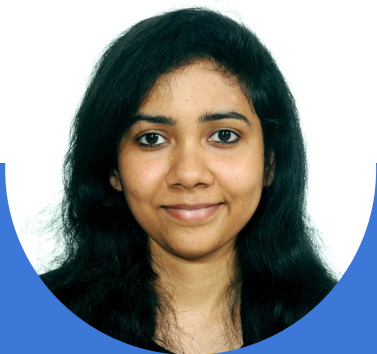
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Julia Nash
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Next.js stan, webdev
Dev.to trusted user,
AI/IoT lead inventor,
Needs way more swag

@nimicent
on dev



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Let's Get Started

What is a Jupyter Notebook?

What are Jupyter Notebooks
used for?

How do Jupyter Notebooks work?

What is NLP?

Natural Language Processing

What is NLP used for?

- Language translation applications such as Google Translate
- Word Processors such as Microsoft Word and Grammarly that employ NLP to check grammatical accuracy of texts.
- Interactive Voice Response (IVR) applications used in call centers to respond to certain users' requests.
- Personal assistant applications such as Google Assistant, Siri, and Alexa.

Why is NLP difficult?

How does Natural Language Processing work?

What are the techniques used in
Natural Language Processing?

Syntax

Semantics

Examples of Natural Language Processing:

- communication devices for people with disabilities; converting sign language to text
- Machine translation of tech manuals and catalogs in foreign languages; Google Translate
- Aircraft maintenance - NLP helps mechanics synthesize info from aircraft manuals; it can find meaning in verbal and handwritten reports of problems from pilots

What is NLU?

Natural Language Understanding

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NLP vs NLU

Examples of Natural Language Understanding:

- Automated Reasoning
- Automatic Routing of Tickets
- Question Answering

What is NLU Sentiment?

What is Sentiment Analysis?

Medium Article on Watson NLU Sentiment

Sentiment Analysis 🙌

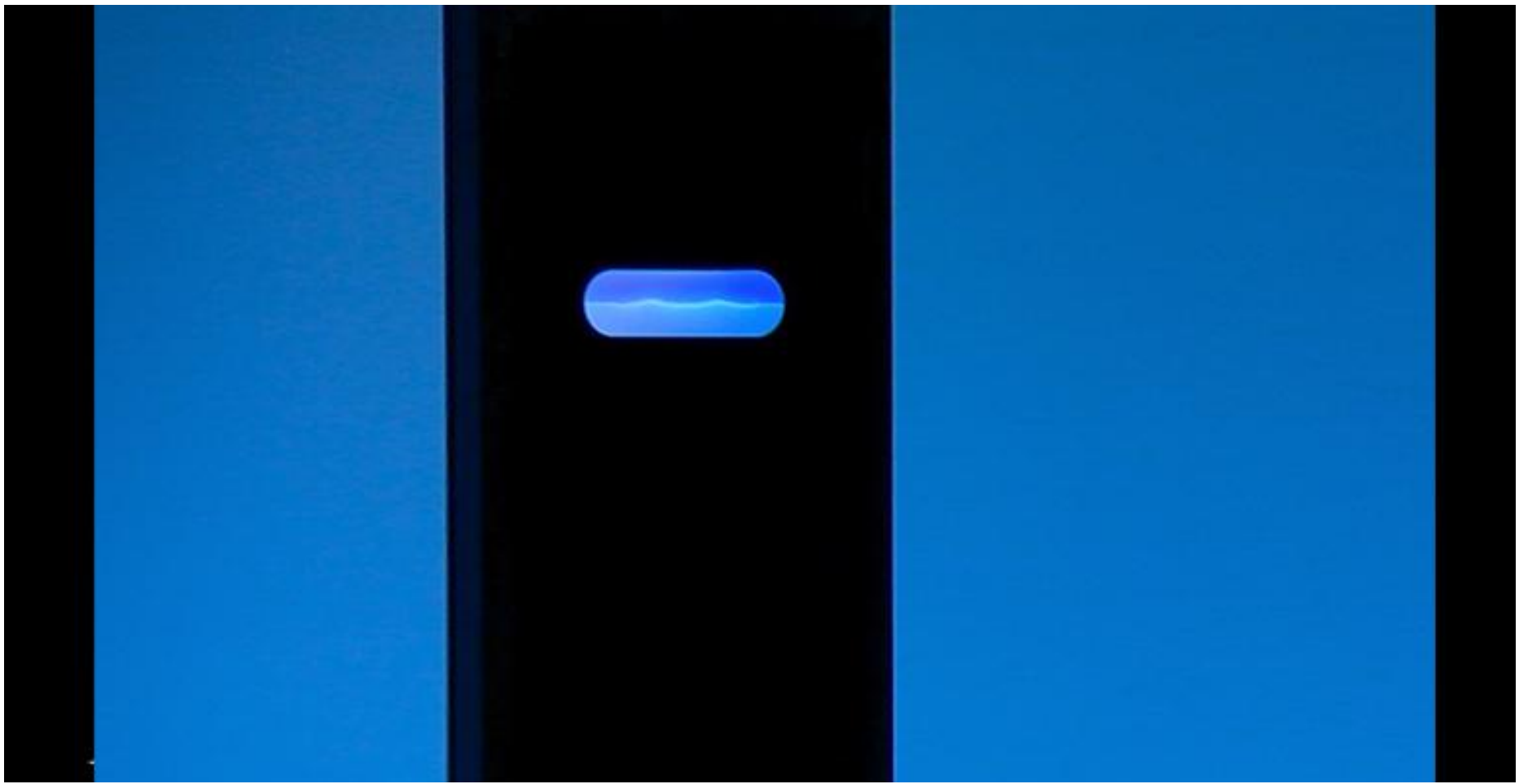
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IBM Project Debater

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What is Project Debater?

What does Project Debater
work?

Why is Project Debater important?



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Why teach a machine to debate?

How is this different than
keyword search?

How does Project Debater learn
a topic?

How does Project Debater form
an argument?

How does the Debater system
know if a claim is for or
against the topic it's given?

What is the format of the
debate?

Is the Debater system actually
listening to the
human debater?

Can Project Debater argue
both sides?

Let's See It in Action!



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Business Use Cases for Project Debater

Data Asset eXchange

Explore useful and relevant data sets for enterprise data science



Dataset | CSV

**IBM Debater® Concept
Abstractness**

September 25, 2020



Dataset | XLSX, TXT

**IBM Debater® Sentiment
Composition Lexicons**

October 23, 2020



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IBM Debater® Sentiment Composition Lexicons

A dataset on the sentiment of phrases from the interaction between its constituents.

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By Orith Toledo-Ronen, Roy Bar-Haim
Updated October 23, 2020 | Published August 1, 2019

Overview

This dataset addresses sentiment composition – predicting the sentiment of a phrase from the interaction between its constituents. For example, in the phrases “reduced bureaucracy” and “fresh injury”, both “reduced” and “fresh” are followed by a negative word. However, “reduced” flips the negative polarity, resulting in a positive phrase, while “fresh” propagates the negative polarity to the phrase level, resulting in a negative phrase. Accordingly, “reduced” is part of our “reversers” lexicon, and “fresh” is part of the “propagators” lexicon.

DAX Dataset Preview Notebook Preview Run Notebook in Watson Studio Dataset Homepage

IBM Debater® Sentiment Composition Lexicons

Dataset Metadata		Dataset Preview		Dataset Glossary	
Label	Sample - 1 (bigram)	Sample - 2 (bigram)	Sample - 1 (unigram)	Sample - 2 (unigram)	
UNIGRAM/BIGRAM	abandoned-attempts	really-great	inhuman	thankful	
POS_TAGS	VBN-NNS	RB-JJ			
SENTIMENT_SCORE	-0.0537094	0.130781	-0.589821	0.258178	

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Comments Organizer

0 Recommend

7 days ago



[PAUL KILROY](#)

The accelerator is created using Data Asset eXchange data to support retail industry. This application will allow companies to view customer reviews in a more organized manner. Reviews are grouped and sentiments are highlighted.

What's included?

- A structured business glossary of more than 20 business terms.
- Sample data science assets

How does it work?

The glossary provides the information architecture that you need to understand retail related business measures. Your data scientists can use the sample notebooks, predictive models and dashboards to accelerate data preparation, machine learning modeling, and data reporting. Moreover, the data scientists may modify the sample notebooks for other business use cases and corresponding datasets.

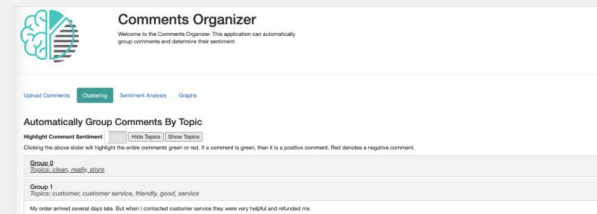
A central place for retailers to easily review customer feedback in an organized manner.

When you import the accelerator:

- The terms are added to your business glossary under the Comments Organizer category.
- The data science assets are added to a new analytics project.

Statistics

0 Favorited
45 Views
0 Files
0 Shares
0 Downloads

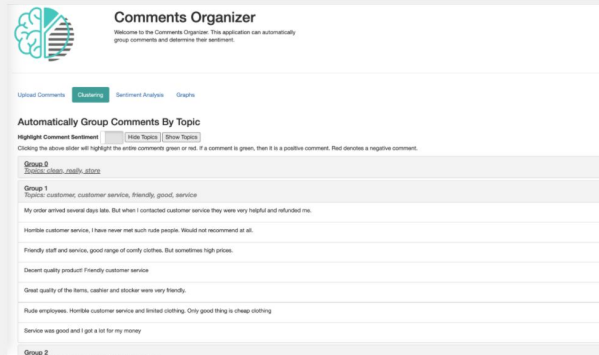


<https://community.ibm.com/community/user/cloudpakfordata/viewdocument/comments-organizer?CommunityKey=c0c16ff2-10ef-4b50-ae4c-57d769937235&tab=librarydocuments&LibraryFolderKey=cb4157b0-cb96-4672-b978-ee3b36f92022&DefaultView=folder>

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- The data science assets are added to a new analytics project.



Comments Organizer
Welcome to the Comments Organizer. This application can automatically group comments and determine their sentiment.

Upload Comments Clustering Sentiment Analysis Graphs

Automatically Group Comments By Topic

Highlight Comment Sentiment ☐ Hide Topics ☐ Show Topics ☐

Clicking the above slider will highlight the entire comments green or red. If a comment is green, then it is a positive comment. Red denotes a negative comment.

Group 0
Topics: clothes, really, arrive

Group 1
Topics: customer, customer service, friendly, good, service

My order arrived several days late. But when I contacted customer service they were very helpful and refunded me.

Horrible customer service. I have never met such rude people. Would not recommend at all.

Friendly staff and service, good range of comfy clothes. But sometimes high prices.

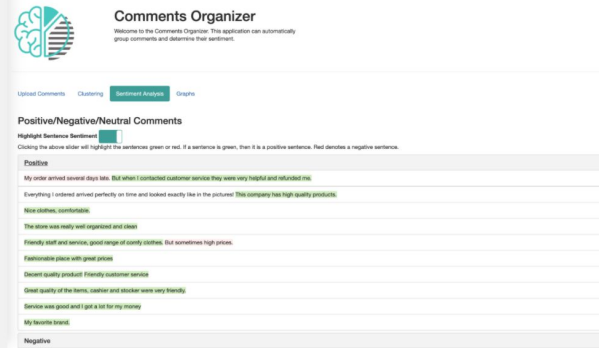
Decent quality product. Friendly customer service.

Great quality of the items, clothes and stocker were very friendly.

Rude employees. Horrible customer service and limited clothing. Only good thing is cheap clothing.

Service was good and got a lot for my money.

Clustering of customer review comments.



Comments Organizer
Welcome to the Comments Organizer. This application can automatically group comments and determine their sentiment.

Upload Comments Clustering Sentiment Analysis Graphs

Positive/Negative/Neutral Comments

Highlight Sentence Sentiment ☐

Clicking the above slider will highlight the sentences green or red. If a sentence is green, then it is a positive sentence. Red denotes a negative sentence.

Positive

My order arrived several days late. But when I contacted customer service they were very helpful and refunded me.

Everything I ordered arrived perfectly on time and looked exactly like in the picture. This company has high quality products.

Nice clothes, comfortable.

The store was really well organized and clean.

Friendly staff and service, good range of comfy clothes, but sometimes high prices.

Rational place with great prices.

Decent quality product. Friendly customer service.

Great quality of the items, clothes and stocker were very friendly.

Service was good and got a lot for my money.

My favorite brand.

Negative

Analyze sentiment of the customer feedback.

<https://community.ibm.com/community/user/cloudpakfordata/viewdocument/comments-organizer?CommunityKey=c0c16ff2-10ef-4b50-ae4c-57d769937235&tab=librarydocuments&LibraryFolderKey=cb4157b0-cb96-4672-b978-ee3b36f92022&DefaultView=folder>

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Let's Check it Out!

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[developer.ibm.com/exchanges/data/all/sentiment-
composition-lexicons](https://developer.ibm.com/exchanges/data/all/sentiment-composition-lexicons)

IBM Debater Notebook & Dataset 🙌

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IBM Debater® Sentiment Composition Lexicons

A dataset on the sentiment of phrases from the interaction between its constituents.

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Get this dataset



Try the notebook



Preview the data & notebooks



Site feedback

By Orith Toledo-Ronen, Roy Bar-Haim

Updated October 23, 2020 | Published August 1, 2019



Legend ⓘ

Categories



Artificial intelligence

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bit.ly/watson-dax



Debater_Sentiment_Lexicons_Notebook



Version author

Yiwen Li

Language

Python 3.7

Last updated

Dec 2, 2020, 6:04 PM

Load and Visualize IBM Debater® Sentiment Composition Lexicons

This notebook relates to the IBM Debater® Sentiment Composition Lexicons dataset. The dataset includes sentiment composition lexicons and sentiment lexicons:

1. Sentiment composition lexicons containing 2,783 words.
2. Sentiment lexicons containing 66,058 unigrams and 262,555 bigrams.

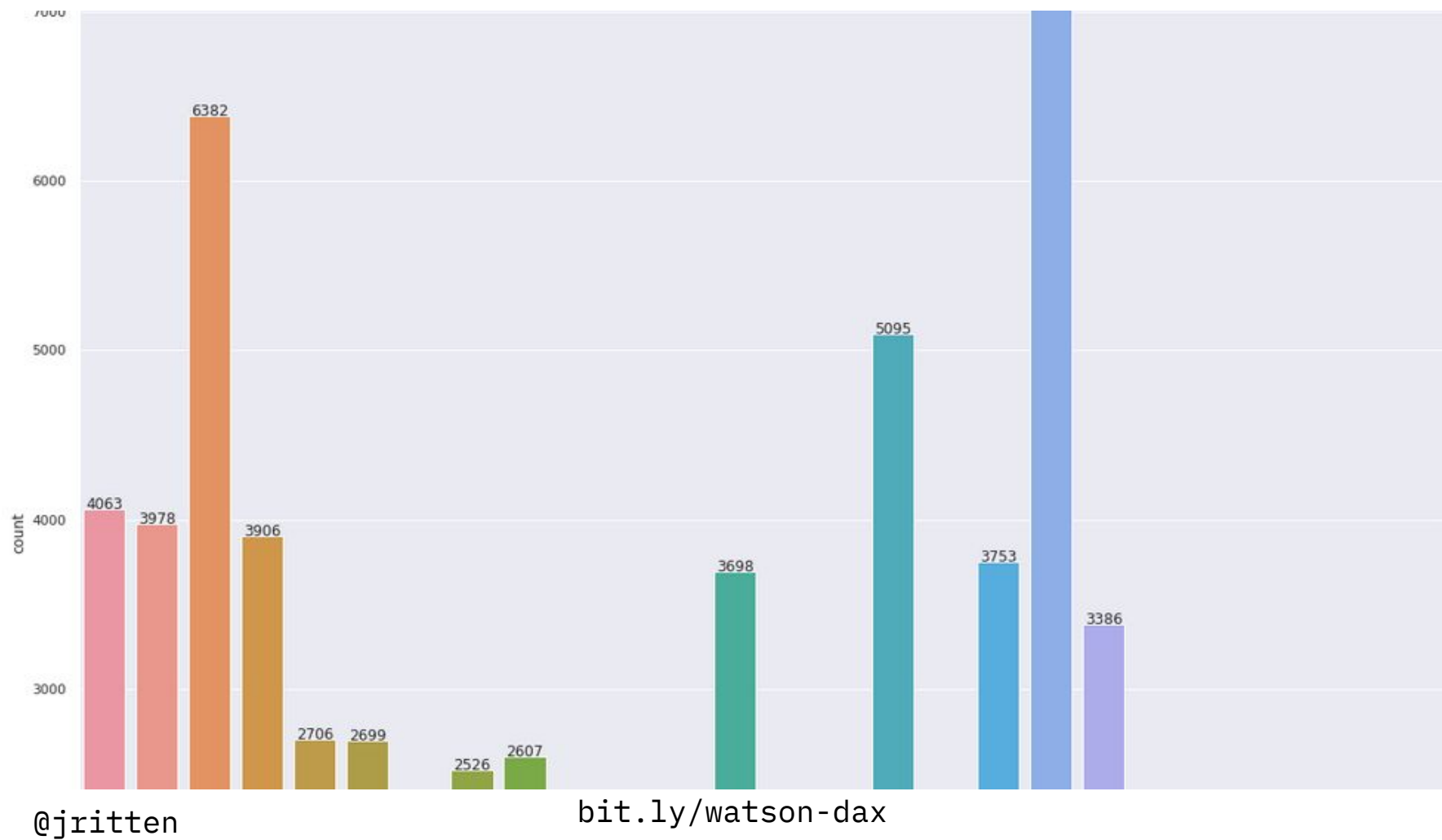
This resource addresses sentiment composition – predicting the sentiment of a phrase from the interaction between its constituents. For example, in the phrases “reduced bureaucracy” and “fresh injury”, both “reduced” and “fresh” are followed by a negative word. However, “reduced” flips the negative polarity, resulting in a positive phrase, while “fresh” propagates the negative polarity to the phrase level, resulting in a negative phrase. Accordingly, “reduced” is part of our “reversers” lexicon, and “fresh” is part of the “propagators” lexicon.

This dataset can be obtained for free from the IBM Developer [Data Asset Exchange](#).

The dataset includes:

1. ReleaseNotes.docx – release notes file describing the data
2. SEMANTIC_CLASSES.xlsx – the composition lexicons for reversers, propagators, and dominators
3. ADJECTIVES.xlsx – the composition lexicons for two gradable adjective pairs (high-low, fast-slow) and their expansion list
4. LEXICON_UG.txt – the unigrams sentiment lexicon





CONGRATULATIONS!

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ibm.biz/jupyter_survey

feedback survey 🙌

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Resource Links

For more datasets:

Data Asset eXchange: developer.ibm.com/exchanges/data/

Some Watson Studio projects and notebooks:

[NOAA Weather](#)

[Groningen Meaning Bank - Modified](#)

[Fashion-MNIST](#)

EVENT RESOURCES:

http://ibm.biz/watson_superclass_three_cloud
(ibm cloud sign-up)

http://ibm.biz/watson_superclass_three_slides
(slides)

<https://www.crowdcast.io/e/watson-superclass-three>
(livestream recording)

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