

# 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 

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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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[crowdcast.io/e/watson-superclass-three](https://crowdcast.io/e/watson-superclass-three)

livestream recording 🙌

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[ibm.biz/watson\\_superclass\\_three\\_cloud](https://ibm.biz/watson_superclass_three_cloud)

ibm cloud sign-up 🙌

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## Create an account

### 1. Account information

Email



Password



Next



### 2. Verify email

### 3. Personal information

Create account



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Developer Advocate @ IBM

Do Cloud API Stuff,  
Collect Swag,  
Write React Code,  
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`ibm.biz/applied_data_science`

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# Let's Get Started

# What is a Jupyter Notebook?



What are Jupyter Notebooks  
used for?

# How do Jupyter Notebooks work?

# Resource Links

For more datasets:

Data Asset eXchange: [developer.ibm.com/exchanges/data/](https://developer.ibm.com/exchanges/data/)

Some Watson Studio projects and notebooks:

[NOAA Weather](#)

[Groningen Meaning Bank - Modified](#)

[Fashion-MNIST](#)

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

# NLP vs NLU



## Examples of Natural Language Understanding:

- Automated Reasoning
- Automatic Routing of Tickets
- Question Answering

# What is NLU Sentiment?

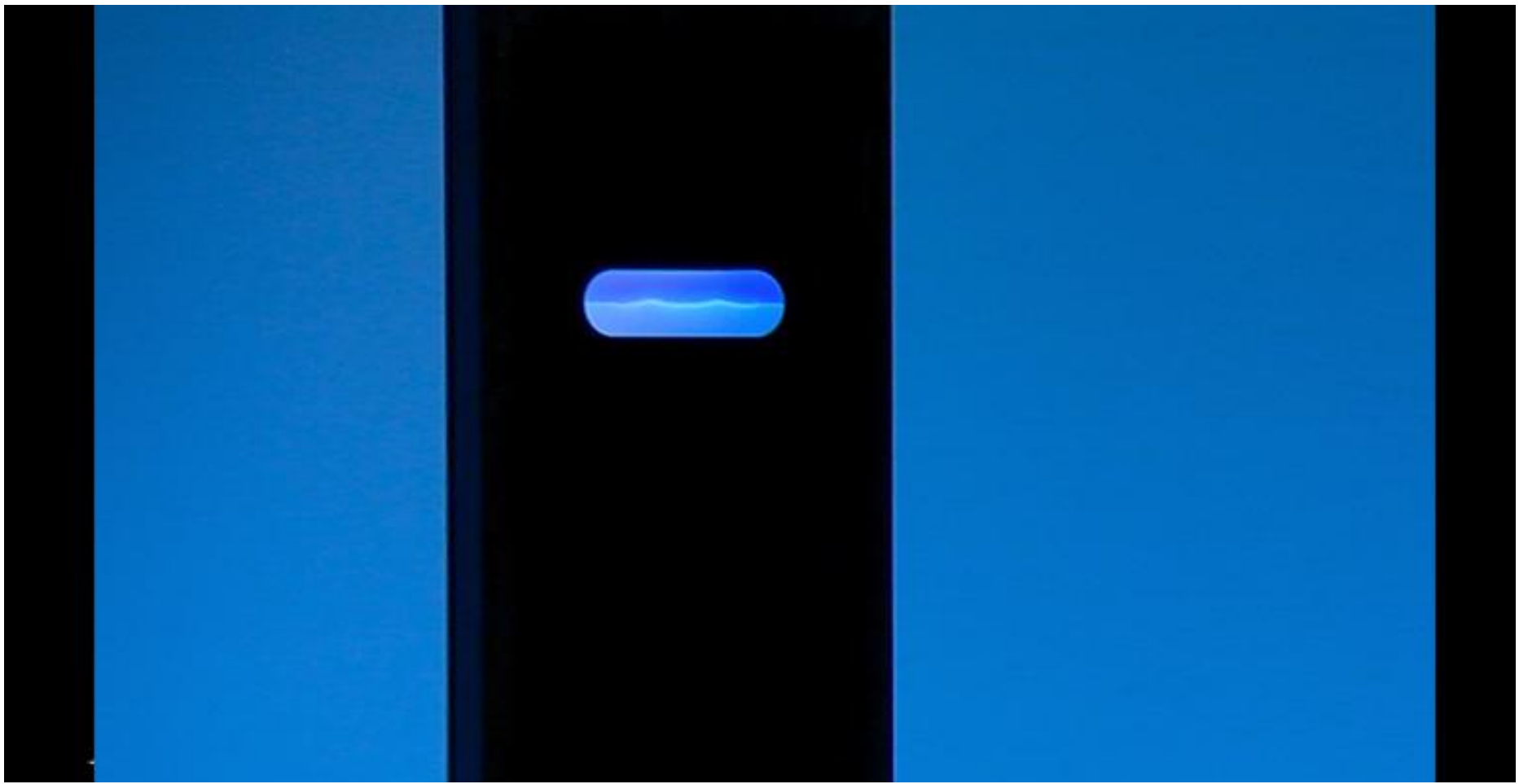
# What is Sentiment Analysis?

# 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?

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

# Business Use Cases for Project Debater

# Business Use Cases for Project Debater



Let's Check it Out!

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## Artificial intelligence

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# IBM Debater® Sentiment Composition Lexicons

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

☆ Save    👍 Like

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



## Overview

Legend ⓘ

Categories



Artificial intelligence

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# 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.

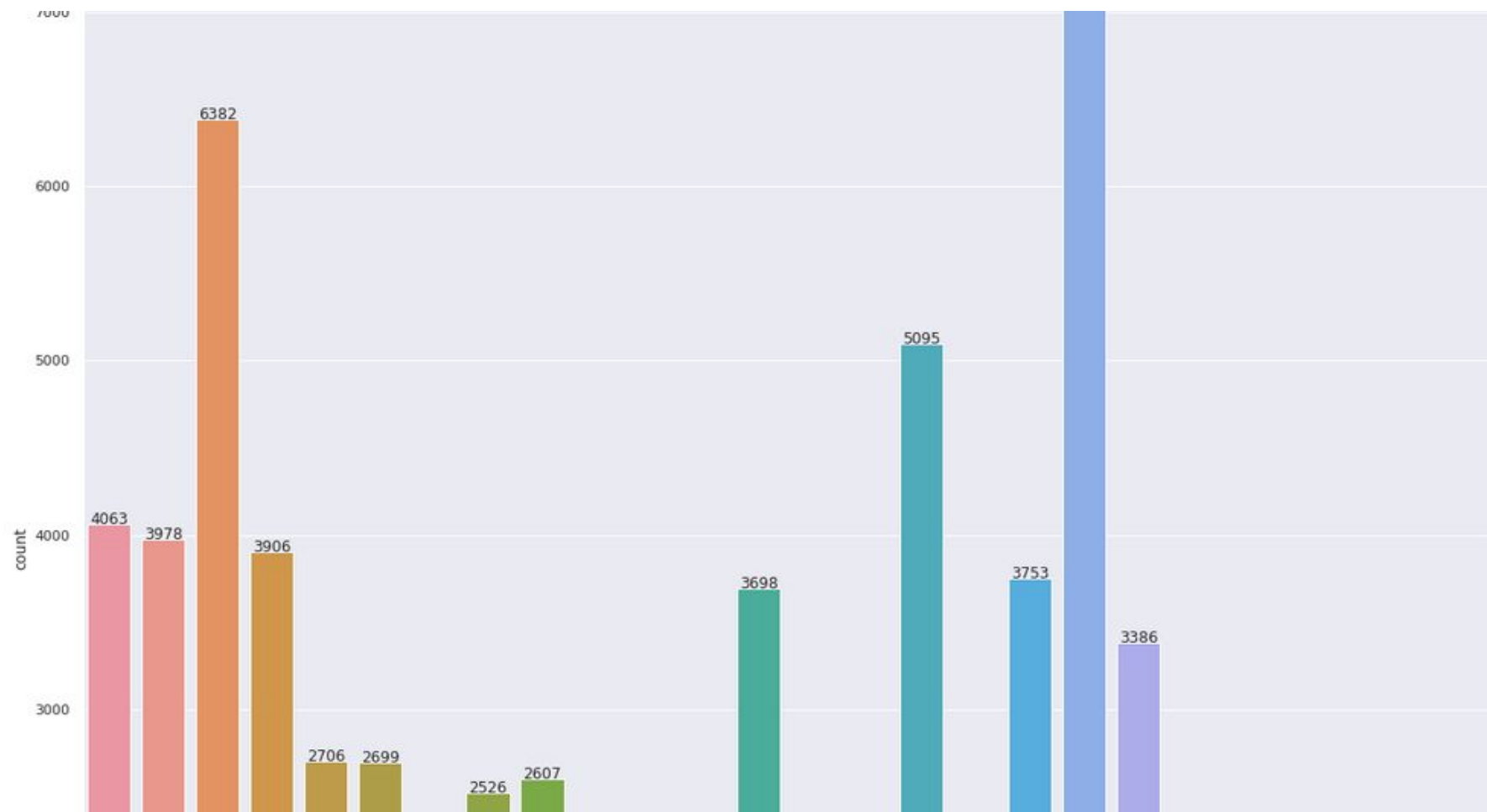
This resource addresses sentiment composition – predicting the sentiment of a phrase from the interaction between its constituents. For example, in the phrases “reduced bureaucracy” and “fresh injury”, both “reduced” and “fresh” are followed by a negative word. However, “reduced” flips the negative polarity, 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





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# CONGRATULATIONS!

[ibm.biz/jupyter\\_survey](https://ibm.biz/jupyter_survey)

feedback survey 🙌

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## EVENT RESOURCES:

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(ibm cloud sign-up)

[http://ibm.biz/watson\\_superclass\\_three\\_slides](http://ibm.biz/watson_superclass_three_slides)  
(slides)

<https://www.crowdcast.io/e/watson-superclass-three>  
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