

# EXERCISE 2 of Assignment-03

1. Create an account with IBM Cloud
2. Use IBM Watson Natural Language Understanding/Text Analysis to run the sentiment analysis

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"Claudine Gay resigned Tuesday as Harvard's president after weeks of controversy initially sparked by her testimony at a congressional hearing on antisemitism, and later focusing on allegations of plagiarism in work she had produced throughout her academic career. (Gay's resignation was first reported by the Harvard Crimson.) Plagiarism is a particularly serious charge in academia: In 2021, the president of the University of South Carolina, Lt. Gen. Robert L. Caslen Jr. resigned after admitting that he had plagiarized a commencement speech. Plagiarism includes a broad

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Name	Type	Confidence
academia	Location	0.98
Tuesday	Date	0.99
scholar	JobTitle	0.77
first	Ordinal	0.81
New York Times	Location	0.51
Wednesday	Date	0.98

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Name	Type	Confidence
Claudine Gay	Person	0.97
University of South Carolina	Organization	0.31
Lt. Gen.	JobTitle	0.12
Robert L. Caslen Jr.	Person	0.94
Harvard Crimson	Organization	0.80
president	JobTitle	0.98

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■ Key Words

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Keyword	Relevance
Claudine Gay	0.833887
allegations of plagiarism	0.794458
congressional hearing	0.713571
op-ed	0.625387
Harvard’s president	0.617773
weeks of controversy	0.607505

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Keyword	Relevance
citation	0.532594
antisemitism	0.531222
testimony	0.529686
commencement speech	0.529481
Gay	0.522364
president	0.517128

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Name	Type	Confidence
2021	Date	0.63
Harvard	Organization	0.57
Plagiarism	Organization	0.37
Gay	Person	0.99
academia	Location	0.98
Tuesday	Date	0.99

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Keyword	Relevance
Plagiarism	0.541036
New York Times	0.538247
citation	0.532594
antisemitism	0.531222
testimony	0.529686
commencement speech	0.529481

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■ Key Words [Edit Text](#)

Keywords  
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Keyword	Relevance
broad range of possible offenses	0.607466
Gay’s resignation	0.577839
Harvard Crimson	0.569852
research findings	0.569002
scholar’s research	0.551096
academic record	0.543248

FEEDBACK

### 3. Is there any difference in the results? What is IBM’s philosophy in sentiment analysis?

#### a) Difference in Results:

The differences in results between the Hugging Face models are due to the binary vs. multi-class classification. The first model gives a simple positive/negative result, while the second provides more nuanced ratings (1-5 stars). Also there is difference in results between transformer models and IBM's Watson Natural Language Understanding (NLU) service for sentiment analysis.

#### b) IBM’s philosophy in sentiment analysis:

IBM's Watson Natural Language Understanding (NLU) service performs sentiment analysis similarly to other transformer models but focuses on providing deeper insights, especially for businesses. For instance, when analyzing social media or customer feedback, Watson might provide sentiment analysis along with:

- Emotion detection (e.g., joy, anger, sadness).
- Keywords driving the sentiment.
- Contextual entity sentiment (what sentiment is associated with a specific product or topic).
- Relationship between Entities