

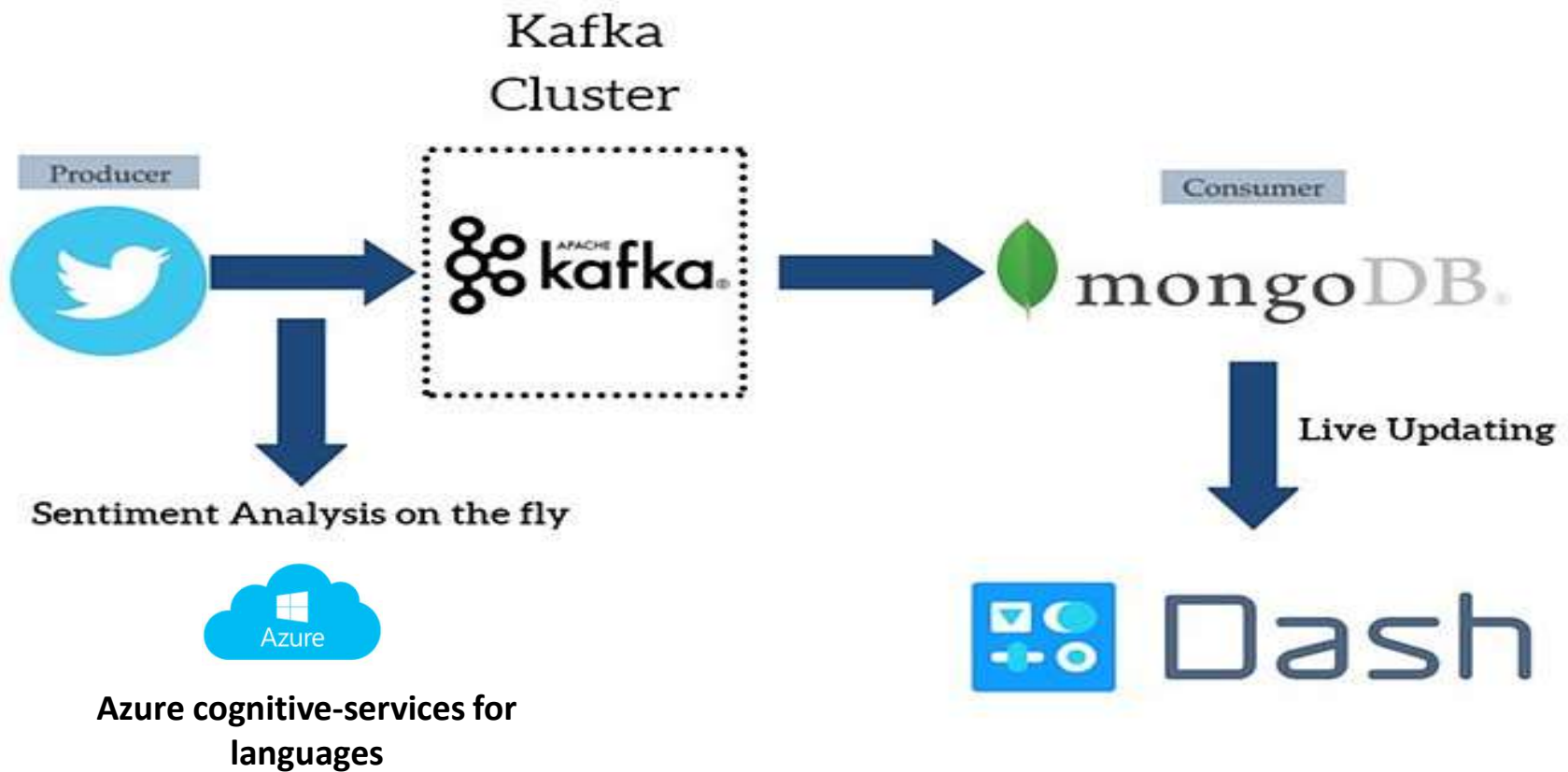
# Introduction - Goal

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I will show how to do simple twitter sentiment analysis in Python with streaming data from Twitter talking about **RUSSIAN – UKRAIN WAR AT THIS TIME.**

The data is streamed into Apache Kafka, then stored in a MongoDB database, and finally, the results are presented in a dashboard made with Dash and Plotly.

# Pipeline



# Fields Fetched by the Twitter Producer

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creation_datetime	The date and time that the tweet was created
favorites	The total number of favorites the tweet has received
followers	The total number of followers the user who tweeted has
location	The location where the tweet happened
retweets	The total number of times that the tweet has been retweeted
senti_val	The sentiment score that was given by the TextBlob module algorithm (more on this later)
subjectivity	The subjectivity score that was given by the TextBlob module algorithm (more on this later)
text	The full text of the tweet
user_description	The description that the users provide about themselves on their profiles
username	The username of the user who tweeted



the fetched JSON objects are published to the Apache Kafka cluster.

# Sentiment Analysis

- After Collecting tweets from twitter , call an external services .In our case we choose Azure cognitive-services for languages and call the API that do the sentiment analysis.
- Output of calling the services are sentiments with their score.
- **Ex** : 1- Sentence 1: I had the best day of my life.

sentiment : positive

Sentence score: Positive=1.00

Neutral=0.00

Negative=0.00

Sentence2 : I wish you were there with me.

Sentence 2 sentiment: neutral

Sentence score: Positive=0.21

Neutral=0.77

Negative=0.02



# MongoDB Consumer

**JSON  
Objects**



The MongoDB Consumer is also written in Python. The consumer uses the pymongo module to connect with the desired collection of the MongoDB database.

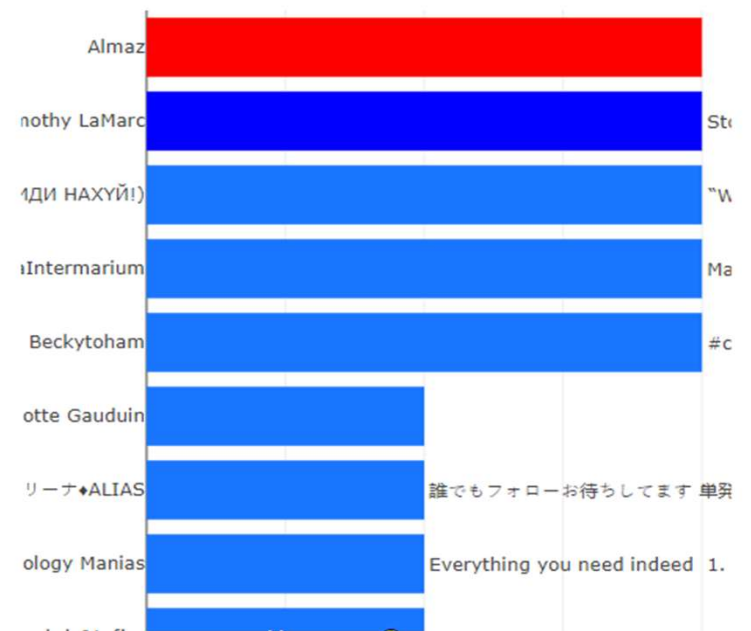
# Streaming Dashboard

## RUSSIA UKRAIN WAR

### Most Recent Tweets on Energy

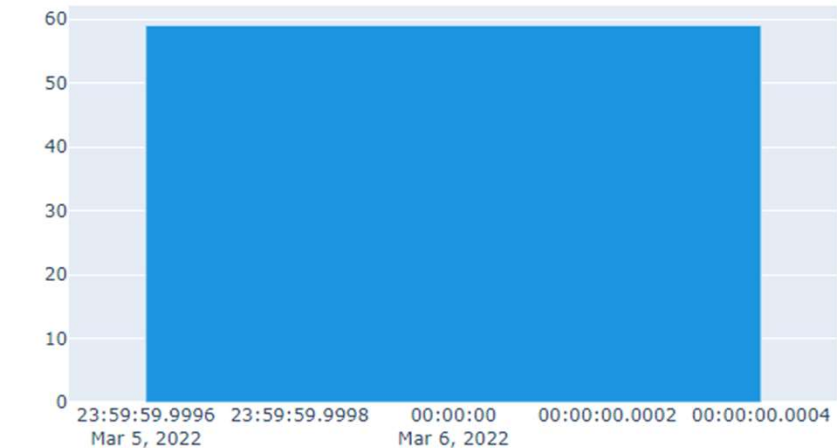
Date	Text	Sentiment Score	Subjectivity Score
2022-03-06	War is terrible. Any war. From the bottom of our hearts and soul, we wish that the world is a place of peace where everyone can live safely. 🙏 Today, we are #TruckingForPeace in Ukraine. ua More at our blog. <a href="https://t.co/Vt18qk1VZI">https://t.co/Vt18qk1VZI</a> <a href="https://t.co/O6YfnuHNEN">https://t.co/O6YfnuHNEN</a>	0.03	0.62
2022-03-06	@terraformersapp @AtomicHub @WAX_io BREAKING: @BanxaOfficial belongs on NASDAQ! A GEM AWAKES!! #crypto #ethereum #bitcoin #russia #putin #ukrain #btc #eth #crypto <a href="https://t.co/SM9LQH1ysd">https://t.co/SM9LQH1ysd</a>	0.0	0.0
2022-03-06	Chciałbym, żeby taki Staszewski, Joński, Szczerba i Ochojska, Lempart i ta, co za artystkę się ma, a teraz posłem PO jest, pojechali na Ukrainę i przed czołgami Rosjan protestowali o wolność i suwerenność tego kraju. Odważni w gębie, a w portkach sraczki pełno. #UkraineRussianWar	0.0	0.0

### Most Active Users Tweeting



# Streaming Dashboard

Tweets per day



Sentimental analysis

