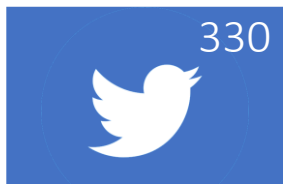# Analyzing Real-Time Tweets and Their Impact on Stock Prices Using NiFi, Solr and Spark MLlib

Use Case 1 - Exploratory and Visualization
Understanding your Customers' Opinions by Streaming and Summarizing Twitter Data

330

Twitter has 330 Million monthly active users expressing their opinion on the internet

Global IP traffic has reached 1.1 Zettabytes. By 2020 it will grow to 40 Zettabytes

1.1

What impact can twitter sentiment have on stock market?

Airlines and hotel industries have adopted twitter based customer service

Aspect-Based Sentiment Analysis

Food
Drinks
Service
Staff
Comfort
Location
Value

Spark Streaming

Twitter data is streaming through spark

NiFi

NiFi connects the streamed twitter data and temporarily stores

Solr

Solr analyzes tweets and summarizes them in terms of location, language, word cloud and top tweeters
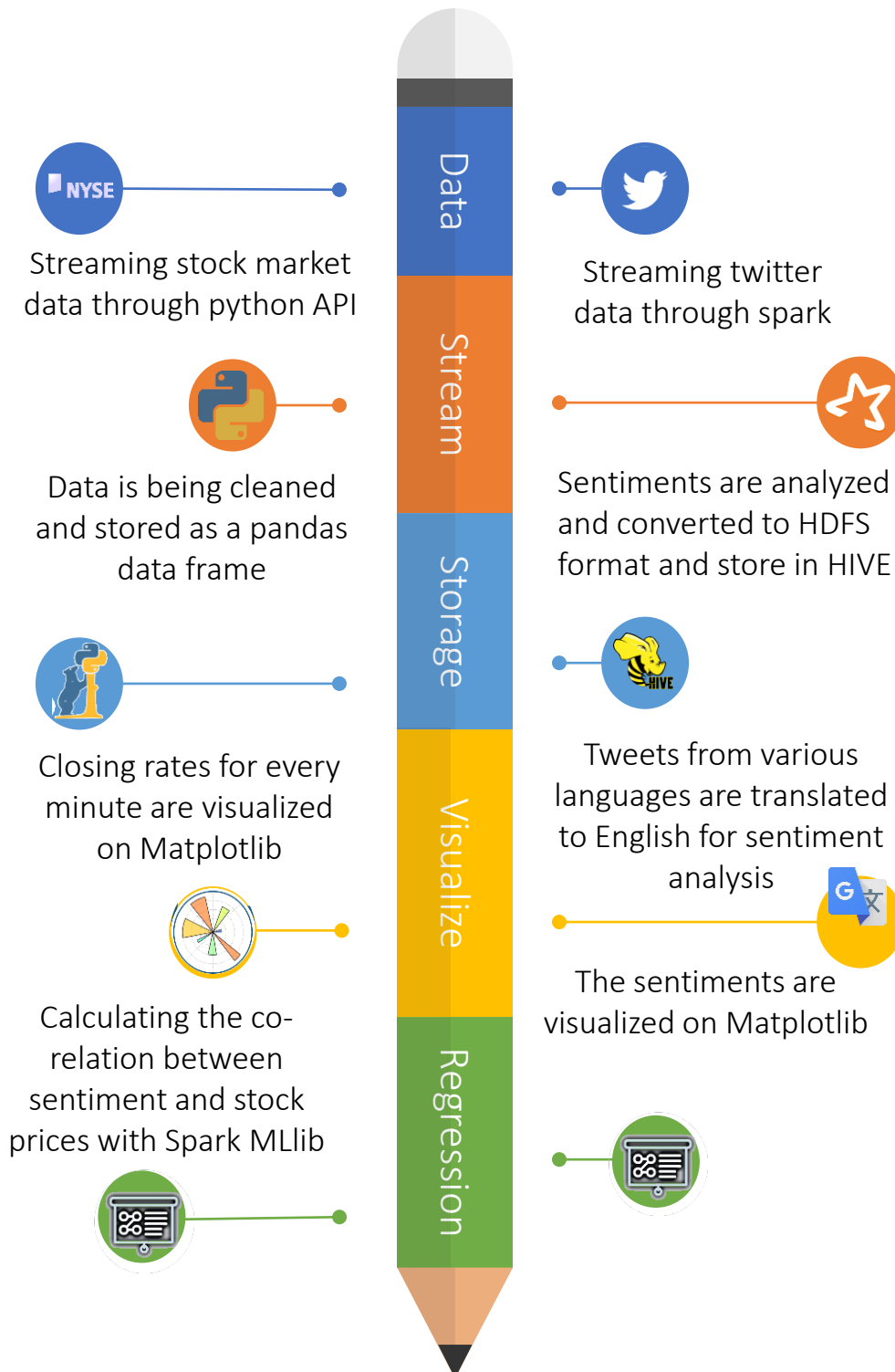
Banana

Interactive Banana Dashboard conveys live streaming data

Use Case 2 – Statistical Analysis
Analyzing the Impact of Global Twitter Sentiment on Target's Stock Price

Data

Streaming stock market data through python API

Streaming twitter data through spark

Stream

Data is being cleaned and stored as a pandas data frame

Sentiments are analyzed and converted to HDFS format and store in HIVE

Storage

Closing rates for every minute are visualized on Matplotlib

Tweets from various languages are translated to English for sentiment analysis

Visualize

Calculating the co-relation between sentiment and stock prices with Spark MLlib

The sentiments are visualized on Matplotlib

Regression

Where can I apply these in my company?

Are you a retailer? Are you launching a marketing campaign? You can measure the consumer reaction with our framework without any kind of a survey.

Launched a new product? Do you want to know how people are receiving it? You can use our framework to gauge customer satisfaction even before they call.

Do you want to stay ahead of your competitors? Set up live customer service through twitter by deploying our framework

Did your company just announce the financial report? Do you want to track market sentiment? Deploy our frame-work and watch live market sentiment stream along with tweets

Section 1 Team 7
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