Zeppelin

Twitter Sentiment A...   ▷ ⌤ 📖 ◪ 🗇 ⬇ 〈/〉   🗑   🕓   ⌨ ⚙ 🔒   default ▾

FINISHED ▷ ⌤ 📖 ⚙

```
import org.apache.spark.streaming._
import org.apache.spark.streaming.twitter._
import org.apache.spark.storage.StorageLevel
import scala.io.Source
import scala.collection.mutable.HashMap
import java.io.File
import org.apache.log4j.Logger
import org.apache.log4j.Level
import sys.process.stringSeqToProcess
```

```
import org.apache.spark.streaming._
import org.apache.spark.streaming.twitter._
import org.apache.spark.storage.StorageLevel
import scala.io.Source
import scala.collection.mutable.HashMap
import java.io.File
import org.apache.log4j.Logger
import org.apache.log4j.Level
import sys.process.stringSeqToProcess
```

Took 21 sec. Last updated by anonymous at January 26 2017, 7:06:56 PM.

FINISHED ▷ ⌤ 📖 ⚙

```
/** Configures the Oauth Credentials for accessing Twitter */
def configureTwitterCredentials(apiKey: String, apiSecret: String, accessToken: String, acces
  val configs = new HashMap[String, String] ++= Seq(
    "apiKey" -> apiKey, "apiSecret" -> apiSecret, "accessToken" -> accessToken, "accessTokenSe
  println("Configuring Twitter OAuth")
  configs.foreach{ case(key, value) =>
    if (value.trim.isEmpty) {
      throw new Exception("Error setting authentication - value for " + key + " not set")
    }
    val fullKey = "twitter4j.oauth." + key.replace("api", "consumer")
    System.setProperty(fullKey, value.trim)
    println("\tProperty " + fullKey + " set as [" + value.trim + "]")
  }
  println()
}
```

```
configureTwitterCredentials: (apiKey: String, apiSecret: String, accessToken: String, accessTo
kenSecret: String)Unit
```

Took 2 sec. Last updated by anonymous at January 26 2017, 7:07:01 PM.

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```
// Configure Twitter credentials
val apiKey = "yCOVn8xTNa08J1iotY8McHWce"
val apiSecret = "LOtYS5XP5IvCbHJZvMA8TTdUhMb2FYTDDBa8IYrwYQJWJaZ8cj"
val accessToken = "273063041-gSEiwLVtMuJKVW5NVExgek7ZUIpHY0enPkohJPK6"
```

Zeppelin

Twitter Sentiment A...

```
...cessTokenSecret = "5YIMg7b10Hpsv9LVVn0oP06lvu5A..."
...Configuration.setOAuthCredentials(apiKey, apiSecret, accessToken, accessTokenSecret)
```

```
apiKey: String = yCOVn8xTNa08J1iotY8McHWce
apiSecret: String = LOtYS5XP5IvCbHJZvMA8TTdUhMb2FYTDDBa8IYrwYQJWJaZ8cj
accessToken: String = 273063041-gSEiwLVtMuJKVW5NVExgek7ZUIpHY0enPkohJPK6
accessTokenSecret: String = 5YIMg7b10Hpsv9LVVn0oP06lvu5ACnu4WH5mVRZzlZPWk
Configuring Twitter OAuth
        Property twitter4j.oauth.consumerKey set as [yCOVn8xTNa08J1iotY8McHWce]
        Property twitter4j.oauth.accessToken set as [273063041-gSEiwLVtMuJKVW5NVExgek7ZUIpHY0e
nPkohJPK6]
        Property twitter4j.oauth.consumerSecret set as [LOtYS5XP5IvCbHJZvMA8TTdUhMb2FYTDDBa8IY
rwYQJWJaZ8cj]
        Property twitter4j.oauth.accessTokenSecret set as [5YIMg7b10Hpsv9LVVn0oP06lvu5ACnu4WH5
mVRZzlZPWk]
```

Took 2 sec. Last updated by anonymous at January 26 2017, 7:07:06 PM.

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```
import org.apache.spark.streaming.twitter._
val ssc = new StreamingContext(sc, Seconds(2))
val tweets = TwitterUtils.createStream(ssc, None)
val twt = tweets.window(Seconds(60))
```

```
import org.apache.spark.streaming.twitter._
ssc: org.apache.spark.streaming.StreamingContext = org.apache.spark.streaming.StreamingContext
@86d658a
tweets: org.apache.spark.streaming.dstream.ReceiverInputDStream[twitter4j.Status] = org.apach
e.spark.streaming.twitter.TwitterInputDStream@214b09c9
twt: org.apache.spark.streaming.dstream.DStream[twitter4j.Status] = org.apache.spark.streamin
g.dstream.WindowedDStream@5ed0d9f5
```

Took 2 sec. Last updated by anonymous at January 26 2017, 7:07:12 PM.

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```
case class Tweet(createdAt:Long, text:String)
twt.map(status=>
  Tweet(status.getCreatedAt().getTime()/1000, status.getText())
).foreachRDD(rdd=>
  // Below line works only in spark 1.3.0.
  // For spark 1.1.x and spark 1.2.x,
  // use rdd.registerTempTable("tweets") instead.
  rdd.toDF().registerTempTable("tweets")
)
```

```
defined class Tweet
warning: there was one deprecation warning; re-run with -deprecation for details
```

Took 2 sec. Last updated by anonymous at January 26 2017, 7:07:24 PM.

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```
twt.print
```

Took 0 sec. Last updated by anonymous at January 26 2017, 7:07:27 PM.

Twitter Sentiment Analysis

..., utcOffset=-10800, timeZone='Santiago', profileBackgroundImageUrl='http://a
bs.twimg.com/images/themes/theme1/bg.png', profileBackgroundImageUrlHttps='https://abs.twimg.c
om/images/themes/theme1/bg.png', profileBackgroundTiled=false, lang='pt', statusesCount=65, is
Verified=false, translated=false, translator=false, listedCount=76, isFollowRequestSent=false,
e, withheldInCountries=null}, withHeldInCountries=null, quotedStatusId=-1, quotedStatus=null},
userMentionEntities=[UserMentionEntityJSONImpl{name='Aconteceu', screenName='AconteceuFatos',
 id=2832255200}], urlEntities=[], hashtagEntities=[], mediaEntities=[], symbolEntities=[], cur
rentUserRetweetId=-1, user=UserJSONImpl{id=722766381637308416, name='Ravenna   ❥', screenName
='EsthefanyErika', location='NÃO É DA SUA CONTA !!', description='MEU FECHAMENTO É VC @EitaNan
ah!!', isContributorsEnabled=false, profileImageUrl='http://pbs.twimg.com/profile_images/82188
1638061834241/E3D2ht48_normal.jpg', profileImageUrlHttps='https://pbs.twimg.com/profile_image
s/821881638061834241/E3D2ht48_normal.jpg', isDefaultProfileImage=false, url='null', isProtecte
d=false, followersCount=121, status=null, profileBackgroundColor='000000', profileTextColor='0
00000', profileLinkColor='981CEB', profileSidebarFillColor='000000', profileSidebarBorderColor
='000000', profileUseBackgroundImage=false, isDefaultProfile=false, showAllInlineMedia=false,
 friendsCount=240, createdAt=Wed Apr 20 08:38:28 EDT 2016, favouritesCount=342, utcOffset=-1,
 timeZone='null', profileBackgroundImageUrl='http://abs.twimg.com/images/themes/theme1/bg.pn
g', profileBackgroundImageUrlHttps='https://abs.twimg.com/images/themes/theme1/bg.png', profil

Took 1 sec. Last updated by anonymous at January 26 2017, 7:07:31 PM.

```
%sql select * from tweets where text like '%trump%' limit 10
```
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createdAt	text
1,485,475,781	RT @MaximusTheRuler: What? #crazy #trump https://t.co/uYEr57avfr
1,485,475,794	RT @VicenteFoxQue: @ajplus @DeniseDresserG trump, I want to see your tax returns¡¡
1,485,475,798	RT @JordanUhl: rt if trump needs to stop talking about his inauguration crowd size
1,485,475,803	@MAGAtrump5 Was Hardiman on Trump's list?
1,485,475,816	RT @princessjarii: trump wants to build a mexican border but wants Mexico to pay for
1,485,475,821	@realDonaldTrump @MiamiHerald go trump!
1,485,475,825	RT @nia4_trump: #climatefacts George Soros paid Al Gore MILLIONS to push junk sci
1,485,475,828	RT @NaYaKnoMi: all you celebrities that claim you are against trump re-tweet, rephras

Took 1 sec. Last updated by anonymous at January 26 2017, 7:10:42 PM.

```
%sql select createdAt, count(1) from tweets group by createdAt order by createdAt
```
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createdAt
1,485,475,668

Zeppelin

1,485,475,669

Twitter Sentiment A...   FINISHED ▷ ☵ 📖 ✐ ⎘ ⬇ ⟨/⟩   🗑   ⏱   ⌨ ⚙ 🔒 default ▾

1,485,475,670

1,485,475,671

1,485,475,672

1,485,475,673

1,485,475,674

Took 4 sec. Last updated by anonymous at January 26 2017, 7:08:54 PM.

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```
def sentiment(s:String) : String = {
    val positive = Array("like", "love", "good", "great", "happy", "cool", "the", "one", "that
    val negative = Array("hate", "bad", "stupid", "is")

    var st = 0;

    val words = s.split(" ")
    positive.foreach(p =>
        words.foreach(w =>
            if(p==w) st = st+1
        )
    )

    negative.foreach(p=>
        words.foreach(w=>
            if(p==w) st = st-1
        )
    )
    if(st>0)
        "positivie"
    else if(st<0)
        "negative"
    else
        "neutral"
}
```

sentiment: (s: String)String

Took 1 sec. Last updated by anonymous at January 26 2017, 7:09:03 PM.

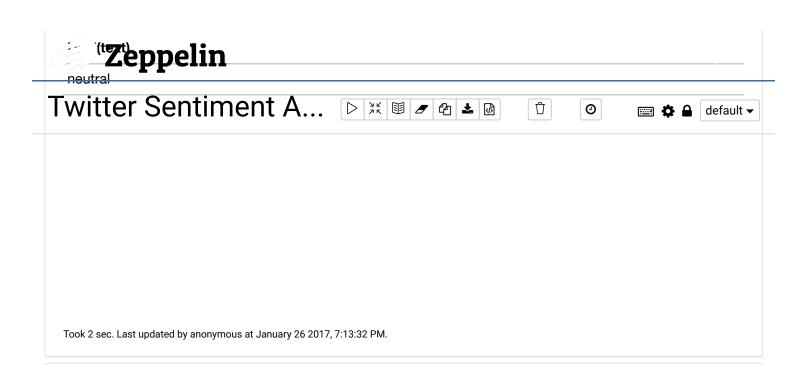FINISHED ▷ ☵ 📖 ⚙

```
sqlc.udf.register("sentiment", sentiment _)
```

res14: org.apache.spark.sql.expressions.UserDefinedFunction = UserDefinedFunction(<function1>, StringType,Some(List(StringType)))

Took 1 sec. Last updated by anonymous at January 26 2017, 7:09:13 PM.

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```
%sql select sentiment(text), count(1) from tweets where text like '%trump%' group by sentiment
```

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Twitter Sentiment A...

Took 2 sec. Last updated by anonymous at January 26 2017, 7:13:32 PM.

READY