

```
// Imports
import org.apache.spark.sql.functions._
import org.joda.time.format.DateTimeFormat
```

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```
import org.apache.spark.sql.functions._
import org.joda.time.format.DateTimeFormat
```

Took 18 sec. Last updated by anonymous at January 26 2017, 7:34:52 PM.

```
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
```

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# SentimentAnalysis\_Aakash Zeppelin

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

Took 4 sec. Last updated by anonymous at January 26 2017, 7:37:22 PM.

```
// Configure Twitter credentials
val apiKey = "MU3n0CNZMF5Lx5hhbne1PjnBr"
val apiSecret = "RzwK2SzFfYmqw16IElnNjao09cCNoswaQ0xz09C2jh1Jj5Mrdj"
val accessToken = "35301383570GrjP1SVMRa5MyhAVRrab04fJYKuKFPqrPlRSbY"
val accessTokenSecret = "JJzb0yeJ8a4asGo0a4HYvsd6cNugvYOPkELNQ9xYeInDY"
configureTwitterCredentials(apiKey, apiSecret, accessToken, accessTokenSecret)
```

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```

apiKey: String = T2PesobmMCiumfMkmGCXWJCFQ
apiSecret: String = 4WTbM8qilVuN8Kx7awPHFJLjZkA6zydubpuEqntUp8hh10yVyr
accessToken: String = 2802028332-F50FdJKkD8zXsfGPYkt7qV4adAeiz1YVUAvVoci
accessTokenSecret: String = Mn9aSxuyphbyHvT2wGgqyFwnPUDViHVHh7sBqWRlM6273
Configuring Twitter OAuth
    Property twitter4j.oauth.consumerKey set as [T2PesobmMCiumfMkmGCXWJCFQ]
    Property twitter4j.oauth.accessToken set as [2802028332-F50FdJKkD8zXsfGPYkt7qV4adAeiz1YVUAvVoci]
    Property twitter4j.oauth.consumerSecret set as [4WTbM8qilVuN8Kx7awPHFJLjZkA6zydubpuEqntUp8hh10yVyr]
    Property twitter4j.oauth.accessTokenSecret set as [Mn9aSxuyphbyHvT2wGgqyFwnPUDViHVHh7sBqWRlM6273]

Took 2 sec. Last updated by anonymous at January 26 2017, 7:43:47 PM. (outdated)

```

**Zeppelin**

**Sentiment Analysis - A**

```

/** Configures the OAuth Credentials for accessing Twitter */
def configureTwitterCredentials(apiKey: String, apiSecret: String, accessToken: String, accessTokenSecret: String): Unit = {
  val configs = new HashMap[String, String] ++= Seq(
    "apiKey" -> apiKey, "apiSecret" -> apiSecret, "accessToken" -> accessToken, "accessTokenSecret" -> accessTokenSecret
  )
  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, accessTokenSecret: String)Unit

Took 1 sec. Last updated by anonymous at January 26 2017, 7:44:00 PM.

```

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))

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")
)

twt.print

ssc.start()

```

1/26/2017localhost:8080/#/notebook/2C9J5A9K8

ities=[UserMentionEntityJSONImpl{name='Solenn Heussaff', screenName='solennheussaff', id=109713578}], urlEntities=[], hashtagEntities=[], mediaEntities=[], symbolEntities=[], currentUserRetweetId=-1, user=UserJSONImpl{id=79373631, name='charmaine tompong', screenName='ChammingT', location='San Mateo, Rizal', description='Agot Isidro in this world of Mocha Usons', isContributorsEnabled=false, profileImageUrl='http://pbs.twimg.com/profile\_images/801842046176608256/VLOdTSyn\_normal.jpg', profileImageUrlHttps='https://pbs.twimg.com/profile\_images/801842046176608256/VLOdTSyn\_normal.jpg', isDefaultProfileImage=false, url='null', isProtected=false, followersCount=540, status=null, profileBackgroundColor='FFFFFF', profileTextColor='000000', profileLinkColor='DB5CDB', profileSidebarFillColor='96386D', profileSidebarBorderColor='000000', profileUseBackgroundImage=true, isDefaultProfile=false, showAllInlineMedia=false, friendsCount=521, createdAt=Sat Oct 03 00:27:59 EDT 2009, favouritesCount=2696, utcOffset=-36000, timeZone='Hawaii', profileBackgroundImageUrl='http://pbs.twimg.com/profile\_background\_images/62460068/nvfallwall.br.jpg', profileBackgroundImageUrlHttps='https://pbs.twimg.com/profile\_background\_images/62460068/nvfallwall.br.jpg', profileBackgroundTiled=false, lang='en', statusesCount=15538, isGeoEnabled=true, isVerified=false, translator=false, listedCount=9, isFollowRequestSent=false, withheldInCountries=null}, withheldInCountries=null, quotedStatusId=-1, quotedStatus=null}StatusJSONImpl{createdAt=Thu Jan 26 20:00:43 EST 2017, id=824784166344495105, text='RT @dasut0613: @dasut0613 이분은 그림라이시다 탐라너머 자주봤던 존잘림.. 트친이 된 날에 설레서 두근세근~~ 친해져여 존잘림 조아해

Took 6 sec. Last updated by anonymous at January 26 2017, 7:44:39 PM.

%sql select \* from tweets where text like '%girl%' limit 10

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createdAt	text
1,485,477,882	#mexican teen sex scandal videos chubby school girl <a href="https://t.co/hPavDM7k0N">https://t.co/hPavDM7k0N</a>
1,485,477,884	RT @zaurenfool: black!!! girl!!! magic!!! <a href="https://t.co/G6X9jxjPqf">https://t.co/G6X9jxjPqf</a>
1,485,477,886	The next girl i date has to be into beer. Who else could I talk to about these bourbon barr
1,485,477,895	RT @thefirstnoel123: @maxinemedina i love you maxine. You made me cry last night! Lab
1,485,477,896	RT @snoopmaya: Istg no girl can make me feel inferior to them
1,485,477,898	This little girl gave me the greatest boost today! She is an "old soul"! #weallneedafriend.

<https://t.co/7rbkNwHAIj1485477898> RT @valpvcinox: Nah they mean the dark girls with 4c h  
air, you knew <https://t.co/BDwd0YMLHk1485477899> RT @girlposts: THIS <https://t.co/FtfnePtcwk1485477899> Got me a big girl car today. Huge thanks to my Uncle Steve at McDonald Ford for search  
ing long... <https://t.co/u1p6yVKk051485477900> women girl scout non nude <https://t.co/LhuMEJ6cDp>

Took 2 sec. Last updated by anonymous at January 26 2017, 7:45:11 PM.

%sql select createdAt, count(1) from tweets group by createdAt order by createdAt

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http://localhost:8080/#/notebook/2C9J5A9K8

3/5

**createdAt**

1,485,477,879

1,485,477,881

1,485,477,882

1,485,477,883

1,485,477,884

1,485,477,885

1,485,477,886

1,485,477,887

1.485.477.888

Took 4 sec. Last updated by anonymous at January 26 2017, 7:45:33 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)
    "positive"
  else if(st<0)
    "negative"
  else
    "neutral"
}

// Below line works only in spark 1.3.0.
// For spark 1.1.x and spark 1.2.x,
// use sqlc.registerFunction("sentiment", sentiment _) instead.
sqlc.udf.register("sentiment", sentiment _)
```

```
sentiment: (s: String)String
res15: org.apache.spark.sql.expressions.UserDefinedFunction = UserDefinedFunction(<function1>,
StringType,Some(List(StringType)))
```

Took 1 sec. Last updated by anonymous at January 26 2017, 7:48:51 PM.

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UDF(text)	coun
neutral	46
negative	6
positivie	17

Took 2 sec. Last updated by anonymous at January 26 2017, 7:49:22 PM.

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