

### Question 1: Sentimental analysis using twitter streaming (related to your project)

Here we could successfully accept the twitter stream to our spark system and perform the sentiment analysis on it using the Stanford core NLP. Here we shall take the twitter streams, convert the rdd's to string and send it to the Stanford core NLP for sentiment analysis.

[illegible]

## Question 2: Make recommendations (related to your own project)

a. Training Data: the Twitter Streaming/categorized data (The categorization here would be from your previous lab 5&6).

b. Testing Dataset e.g., UserId, Category, Rating

c. The rating based on sentiment analysis, retweet count would be interesting.

d. Expected outcome is to make a recommendation based on user profile (e.g., preferences, location, gender, age)

Description: Here we had trained the system based on the tweets and had recommended certain tweets of other user based on the groups and we have used the collaborative filtering technique for the same. Here the tweets are stored in a file making the data static however we shall try in our next work to make this data dynamic.

## Screenshots:

The screenshot displays an IDE window titled 'SimpleRecommendationSystem'. The left sidebar shows a project structure with folders like 'src', 'main', 'scala', 'test', 'target', and 'build.sbt'. The main editor shows Scala code for 'SimpleRecommendation.scala'. The code includes comments and logic for training an ALS model and generating recommendations. The bottom panel shows the execution output, which includes logs from TaskSetManager, DAGScheduler, and SparkUI, along with the final recommendation results for two users.

```
// format: (movieId, movieName)
(fields(0).toInt, fields(1))
}.collect().toMap

// Build the recommendation model using ALS
val rank = 12
val numIterations = 20
val model = ALS.train(training, rank, numIterations, 0.1)

val myRatedMovieIds = myRatings.map(_._product).toSet
val candidates = sc.parallelize(movies.keys.filter(!myRatedMovieIds.contains(_)).toSeq)

val recommendations = model.predict(candidates.map((_, _))).collect()
```

Run SimpleRecommendation

```
16/03/11 11:26:58 INFO TaskSetManager: Finished task 1.0 in stage 249.0 (TID 212) in 38 ms on localhost (4/4)
16/03/11 11:26:58 INFO TaskSchedulerImpl: Removed TaskSet 249.0, whose tasks have all completed, from pool
16/03/11 11:26:58 INFO DAGScheduler: ResultStage 249 (collect at SimpleRecommendation.scala:54) finished in 0.039 s
16/03/11 11:26:58 INFO DAGScheduler: Job 8 finished: collect at SimpleRecommendation.scala:54, took 0.256644 s
tweets recommended for you:
Rating(0,2,3.0243487381910956)
1: Mansion elan the move tonight
Rating(0,3,2.7430479133582857)
2: i can't wait to go lol
16/03/11 11:26:58 INFO SparkUI: Stopped Spark web UI at http://192.168.176.1:4040
16/03/11 11:26:58 INFO MapOutputTrackerMasterEndpoint: MapOutputTrackerMasterEndpoint stopped!
16/03/11 11:26:59 INFO MemoryStore: MemoryStore cleared
16/03/11 11:26:59 INFO BlockManager: BlockManager stopped
16/03/11 11:26:59 INFO BlockManagerMaster: BlockManagerMaster stopped
16/03/11 11:26:59 INFO OutputCommitCoordinator$OutputCommitCoordinatorEndpoint: OutputCommitCoordinator stopped!
16/03/11 11:26:59 INFO SparkContext: Successfully stopped SparkContext
```

Compilation completed successfully in 7s 148ms (4 minutes ago)

Search the web and Windows

11:30 AM 3/11/2016

### 3) Twitter trend notification to smartphone/smartwatch

Description: After finishing the sentiment analysis, I had send these over to display on the smartwatch using the Socket Client program.

Screenshots:



I'm waiting here: 1234

SiteLocalAddress: 10.99.1.156

#1 from /10.151.6.239:57428

@liltsun I had a friend who bugged me to watch it,  
plus I was looking for one cour shows:nullreplayed:

Hello from Android, you are #1

#2 from /10.151.6.239:57429

@suno\_khamoshii great:nullreplayed: Hello from  
Android, you are #2

#3 from /10.151.6.239:57430

RT @MensHumor: When someone uses  
your driveway to turn around... <https://t.co/XIZSMnEvva>:nullreplayed: Hello from Android, you  
are #3

#4 from /10.151.6.239:57432

Romantic ♡~ <https://t.co/6trzW6n75g>:Tweet-  
WithSentiment [line=Romantic ♡~ <https://t.co/6trzW6n75g>, cssClass=sentiment : positive]replayed:  
Hello from Android, you are #4

#5 from /10.151.6.239:57437

RT @Olivianuzzi: Donald Trump's business career  
and presidential campaign has been based on  
exaggerations and deceptions. <https://t.co/j81P...>:nullreplayed: Hello from Android, you are #5

#6 from /10.151.6.239:57440

if that's what getting bills in the mail feels like,  
I'd rather be homeless:TweetWithSentiment  
[line=if that's what getting bills in the mail feels  
like, I'd rather be homeless, cssClass=sentiment :  
negative]replayed: Hello from Android, you are #6

#7 from /10.151.6.239:57442



#### 4) Searching or recommendation through smartphone/smartwatch

Description: Here we had sent out the results to the smart phones using the socket client connections.

Screenshots:

