Report for Lab Assignment 5

Questions:

Spark and Smartphone/Watch Application

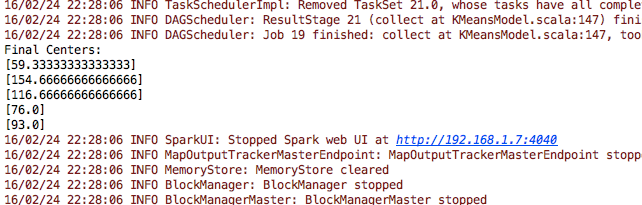
Implement a smart application with big data analytics related to your project showing the collaboration between Spark and Smart Apps. Note: For the big data analytics part, you can use either SparkR or Spark MLlib.

Descriptions:

Using sparkR Mlib run k means analysis and sent notifications to watch

Screenshot:







Questions:

SparkR – Extra Credit

Install Spark and Configure SparkR. Execute Word Count and K-Means Clustering algorithms using your own data (relevant to your project) with SparkR. Write a report including your algorithms and result screenshots. Modify the K-Means SparkR implementation for K-Medoids algorithm. Reference: <https://amplab-> extras.github.io/SparkR-pkg/

sparkR code: ./sparkR kmeans.R local “Heart rate sample data.txt” 3 9

Descriptions:

By using the specific K-means.R package and run it in sparkR, I calculated the k means for sample heart rate.

Screenshot/sparkR output file:

Finished iteration (delta = 86832 )

[1] 9

There were 50 or more warnings (use warnings() to see the first 50)

Final centers:

123

61

125

55

76

73

89

137

139

101

99

84

110

90

95

55

72

114

52

54

124

53

71

108

102

104

103

79

94

51

59

87

105

133

123

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125

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114

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124

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108

102

104

103

79

94

51

59

87

105

133

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[1,] 1452 4800 1728 6348 1875 2352 432 3888 4332 0 12 867

[2,] 4563 1587 5043 2523 192 363 75 8427 9075 867 675 0

[3,] 1728 4332 2028 5808 1587 2028 300 4332 4800 12 0 675

[4,] 1200 5292 1452 6912 2187 2700 588 3468 3888 12 48 1083

[5,] 972 5808 1200 7500 2523 3072 768 3072 3468 48 108 1323

[6,] 15552 300 16428 48 1875 1452 4332 22188 23232 7500 6912 3267

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[8,] 2523 3267 2883 4563 972 1323 75 5547 6075 147 75 300

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[14,] 1083 5547 1323 7203 2352 2883 675 3267 3675 27 75 1200

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[17,] 7803 363 8427 867 48 3 867 12675 13467 2523 2187 432

[18,] 8112 300 8748 768 75 12 972 13068 13872 2700 2352 507

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[20,] 588 17328 432 20172 11163 12288 6912 0 12 3888 4332 8427

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[2,] 2028 108 363 2523 432 2700 3072 2700 4800 2883 507 1728

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[33,] 9408 3888 5043 3 972 10800 12 0 14700 3 867 8748

[34,] 192 432 147 6627 2700 432 7500 6912 1452 7203 2883 108

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[5,] 27 3 12 2028 363 8748 6348 972 0 2352

[6,] 7803 8427 8112 2352 5547 0 192 3888 8748 20172

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[8,] 192 300 243 675 0 5547 3675 147 363 4563

[9,] 7500 8112 7803 2187 5292 3 147 3675 8427 19683

[10,] 4107 3675 3888 10800 6075 23232 19200 8112 3468 108

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[12,] 7203 7803 7500 2028 5043 12 108 3468 8112 19200

[13,] 5547 6075 5808 1200 3675 192 0 2352 6348 16428

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[15,] 6627 7203 6912 1728 4563 48 48 3072 7500 18252

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[30,] 1587 1323 1452 6348 2883 16428 13068 4332 1200 192

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[32,] 2883 2523 2700 8748 4563 20172 16428 6348 2352 0

[33,] 6912 7500 7203 1875 4800 27 75 3267 7803 18723

[34,] 0 12 3 1587 192 7803 5547 675 27 2883

16/02/23 12:50:17 INFO SparkContext: Invoking stop() from shutdown hook

16/02/23 12:50:17 INFO SparkUI: Stopped Spark web UI at http://10.151.4.221:4040

16/02/23 12:50:17 INFO MapOutputTrackerMasterEndpoint: MapOutputTrackerMasterEndpoint stopped!

16/02/23 12:50:17 INFO MemoryStore: MemoryStore cleared

16/02/23 12:50:17 INFO BlockManager: BlockManager stopped

16/02/23 12:50:17 INFO BlockManagerMaster: BlockManagerMaster stopped

16/02/23 12:50:17 INFO OutputCommitCoordinator$OutputCommitCoordinatorEndpoint: OutputCommitCoordinator stopped!

16/02/23 12:50:17 INFO SparkContext: Successfully stopped SparkContext

16/02/23 12:50:17 INFO ShutdownHookManager: Shutdown hook called

16/02/23 12:50:17 INFO ShutdownHookManager: Deleting directory /private/var/folders/qk/1jbpq9p52n9004zj72d6bz6r0000gn/T/spark-5e8ae920-7ec5-4590-b2a6-10ca630ca1f0

weis-mbp:bin whng2$