

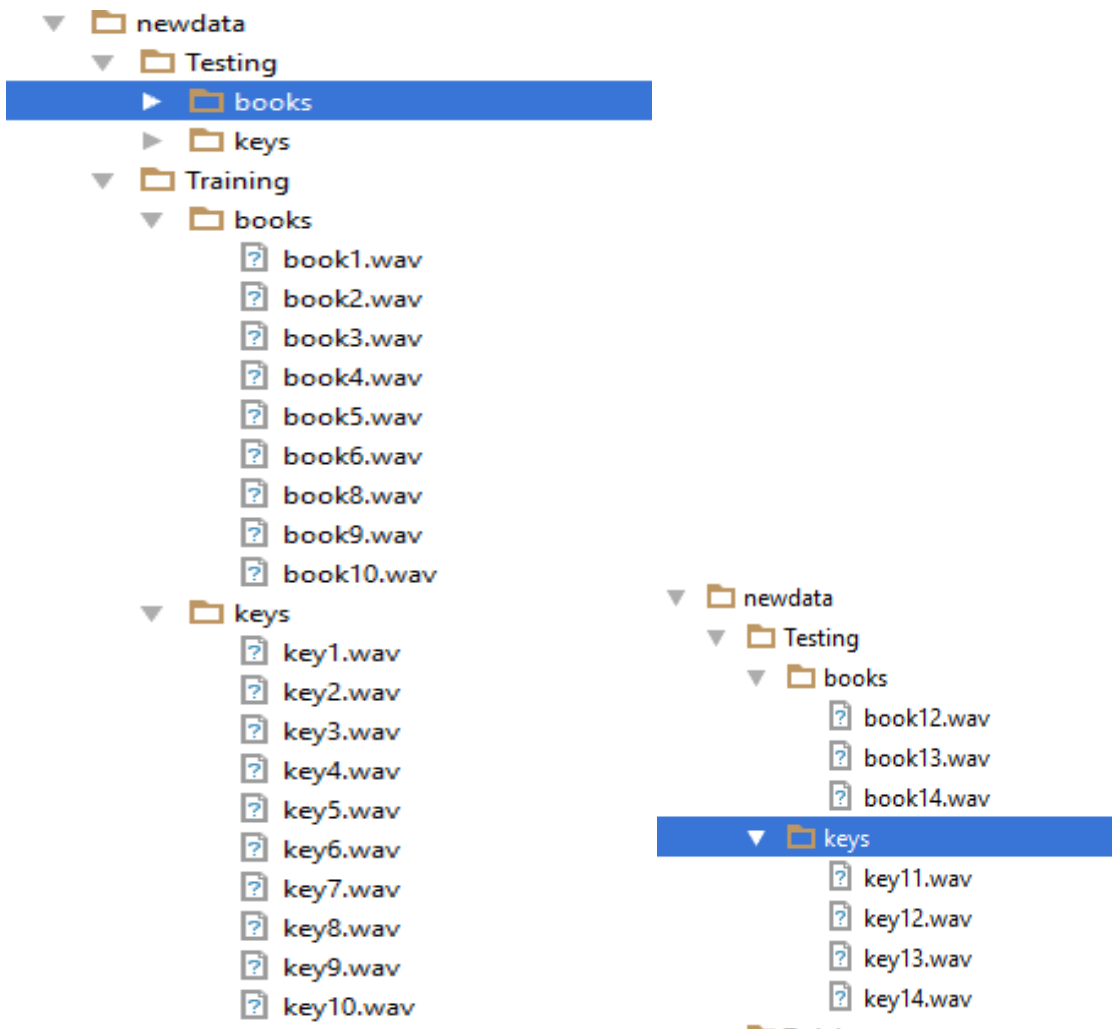
ASSIGNMENT 10

QUESTION__ Audio Classification and Smart Phone Notification

- 1) Audio collection based on the tags (related to your project)
 - a. Training Datasets (audio data from smart devices or online sound repositories such as <https://www.freesound.org/>)
 - b. Testing Datasets (audio data from smart devices)
- 2) Audio Classification based on the categories related to your project
- 3) Notification to smartphone/smartwatch
- 4) Bonus points:
 - Music Recommendation system (related to your own project)
 - a. make a recommendation based on user profile (e.g., preferences, location, gender, age)
 - b. Recommendation through smartphone/smartwatch using your ML application

Description:

- 1. **Audio Collection: collected sounds of keys and books and divided into training and testing data.**



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1.0 [10599, 0.2, 5.366630654934944E-6, 0.6683599609375, 0.42, 2.235023858092171E-5]
file:/F:/BAA/Tutorial ppt/CS5542-Tutorial10-SourceCode/AudioClassification/newdata/Training/keys/key2.wav
F:/BAA/Tutorial ppt/CS5542-Tutorial10-SourceCode/AudioClassification/newdata/Training/keys/key2.wav129839.0;0.0;0.6703033447265625;0.606666666666667;1.182786534719682E-5
(0.0, [129839.0, 0.0, 0.6703033447265625, 0.606666666666667, 1.182786534719682E-5])
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F:/BAA/Tutorial ppt/CS5542-Tutorial10-SourceCode/AudioClassification/newdata/Training/books/book1.wav184082.0;0.879146017297201E-11;0.47228050231933594;0.4533333333333333;6.294654565779961E-6]
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file:/F:/BAA/Tutorial ppt/CS5542-Tutorial10-SourceCode/AudioClassification/newdata/Training/books/book10.wav
F:/BAA/Tutorial ppt/CS5542-Tutorial10-SourceCode/AudioClassification/newdata/Training/books/book10.wav12508.0;0.0;0.146240234375;0.68;2.146285564096060E-5
(0.0, [102508.0, 0.0, 0.146240234375, 0.68, 2.146285564096060E-5])
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F:/BAA/Tutorial ppt/CS5542-Tutorial10-SourceCode/AudioClassification/newdata/Training/books/book2.wav2400.0;5.366986835625605E-9;0.143646240234375;0.58;2.4779937790316107E-4]
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1.0 [2400.0, 5.366986835625605E-9, 0.143646240234375, 0.58, 2.4779937790316107E-4]
```

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F:/BAA/Tutorial ppt/CS5542-Tutorial10-SourceCode/AudioClassification/newdata/Testing/books/book12.wav4733.0;1.0172440969274631E-7;0.083770751953125;0.4533333333333333;1.5917107
0.0, [4733.0, 1.0172440969274631E-7, 0.083770751953125, 0.4533333333333333, 1.5917107044697562E-4]
0.0 [4733.0, 1.0172440969274631E-7, 0.083770751953125, 0.4533333333333333, 1.5917107044697562E-4]
F:/BAA/Tutorial ppt/CS5542-Tutorial10-SourceCode/AudioClassification/newdata/Testing/keys/key14.wav72020.0;8.435248978415518E-11;0.6594047546386719;0.5133333333333333, 3.3529622622975525E-5]
(1.0, [72020.0, 8.435248978415518E-11, 0.6594047546386719, 0.5133333333333333, 3.3529622622975525E-5]
1.0 [72020.0, 8.435248978415518E-11, 0.6594047546386719, 0.5133333333333333, 3.3529622622975525E-5]
16/04/13 08:43:33 INFO Executor: Finished task 1.0 in stage 1.0 (TID 3). 2044 bytes result sent to driver
16/04/13 08:43:33 INFO TaskSetManager: Finished task 1.0 in stage 1.0 (TID 3) in 3258 ms on localhost (1/2)
F:/BAA/Tutorial ppt/CS5542-Tutorial10-SourceCode/AudioClassification/newdata/Testing/books/book13.wav123928.0;0.0;0.26194000244140625;0.6133333333333333;1.181727542244837E-6
0.0, [123928.0, 0.0, 0.26194000244140625, 0.6133333333333333, 1.181727542244837E-6]
0.0 [123928.0, 0.0, 0.26194000244140625, 0.6133333333333333, 1.181727542244837E-6]
F:/BAA/Tutorial ppt/CS5542-Tutorial10-SourceCode/AudioClassification/newdata/Testing/books/book14.wav67608.0;1.4260876927399515E-9;0.2773933410644531;0.5733333333333333;3.10676
0.0, [67608.0, 1.4260876927399515E-9, 0.2773933410644531, 0.5733333333333333, 3.1067675263432887E-6]
0.0 [67608.0, 1.4260876927399515E-9, 0.2773933410644531, 0.5733333333333333, 3.1067675263432887E-6]
F:/BAA/Tutorial ppt/CS5542-Tutorial10-SourceCode/AudioClassification/newdata/Testing/keys/key11.wav7778.0;8.70195297211306E-9;0.7001953125;0.58;2.566187499334068E-5
1.0, [7778.0, 8.70195297211306E-9, 0.7001953125, 0.58, 2.566187499334068E-5]
1.0 [7778.0, 8.70195297211306E-9, 0.7001953125, 0.58, 2.566187499334068E-5]
```

```
16/04/13 08:44:00 INFO DAGScheduler: ResultStage 5 (count at AudioClassification.scala:68) finished in 0.637 s
16/04/13 08:44:00 INFO TaskSetManager: Finished task 0.0 in stage 5.0 (TID 10) in 637 ms on localhost (2/2)
16/04/13 08:44:00 INFO TaskSchedulerImpl: Removed TaskSet 5.0, whose tasks have all completed, from pool
16/04/13 08:44:00 INFO DAGScheduler: Job 4 finished: count at AudioClassification.scala:68, took 0.652501 s
Accuracy : 0.7142857142857143
16/04/13 08:44:00 INFO SparkContext: Starting job: collectAsMap at MulticlassMetrics.scala:49
16/04/13 08:44:00 INFO DAGScheduler: Registering RDD 10 (map at MulticlassMetrics.scala:46)
16/04/13 08:44:00 INFO DAGScheduler: Got job 5 (collectAsMap at MulticlassMetrics.scala:49) with 2 output partitions
16/04/13 08:44:00 INFO DAGScheduler: Final stage: ResultStage 7 (collectAsMap at MulticlassMetrics.scala:49)
16/04/13 08:44:00 INFO DAGScheduler: Parents of final stage: List(ShuffleMapStage 6)
16/04/13 08:44:00 INFO DAGScheduler: Missing parents: List(ShuffleMapStage 6)
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16/04/13 08:44:13 INFO BlockManagerInfo: Removed broadcast_10_piece0 on localhost:50394 in memory
16/04/13 08:44:13 INFO ContextCleaner: Cleaned accumulator 9
16/04/13 08:44:13 INFO ContextCleaner: Cleaned shuffle 2
Confusion Matrix

: 2.0  1.0
1.0  3.0
16/04/13 08:44:14 INFO SparkContext: Invoking stop() from shutdown hook
16/04/13 08:44:14 INFO SparkUI: Stopped Spark web UI at http://192.168.1.171:4040
16/04/13 08:44:15 INFO MapOutputTrackerMasterEndpoint: MapOutputTrackerMasterEndpoint stopped!
16/04/13 08:44:15 INFO MemoryStore: MemoryStore cleared
```

3. Recommendation To Smart Phone

