

Interim Report

Team number: ##

Team members: 000, 000, 000

Team number			
Team members			
Check competitions and tracks where you are participating			
Competition 1			Competition 2
Track 1: Speech	Track 2: Face	Track 3: Speech + Face	Conversational agents
0	X	X	X

F Fill in tables on the following pages
according to competitions and tracks where you are participating.

Competition 1 – Track 1: Speech emotion recognition**Classification methods used to predict speech emotion (in detail)**

Our team takes a deep learning approach to predict speech emotion.

Classification algorithm: Mini-batch stochastic gradient descent. Adam optimization.

We are using a deep neural network whose architecture is:

```
model = Sequential()
model.add(Conv1D(256, 8, padding='same', input_shape=(X_train.shape[1],1))) #1
model.add(Activation('relu'))
model.add(Conv1D(256, 8, padding='same')) #2
model.add(BatchNormalization())
model.add(Activation('relu'))
model.add(Dropout(0.25))
model.add(MaxPooling1D(pool_size=(8)))
model.add(Conv1D(128, 8, padding='same')) #3
model.add(Activation('relu'))
model.add(Conv1D(128, 8, padding='same')) #4
model.add(Activation('relu'))
model.add(Conv1D(128, 8, padding='same')) #5
model.add(Activation('relu'))
model.add(Conv1D(128, 8, padding='same')) #6
model.add(BatchNormalization())
model.add(Activation('relu'))
model.add(Dropout(0.25))
model.add(MaxPooling1D(pool_size=(8)))
model.add(Conv1D(64, 8, padding='same')) #7
model.add(Activation('relu'))
model.add(Conv1D(64, 8, padding='same')) #8
model.add(Activation('relu'))
model.add(Flatten())
model.add(Dense(target_class)) #9
model.add(Activation('softmax'))
opt = keras.optimizers.SGD(lr=0.0001, momentum=0.0, decay=0.0, nesterov=False)
```

Datasets used (in brief)

Provided training sets, The Ryerson Audio-Visual Database of Emotional Speech and Song (RAVDESS)

Describe your pre-processing procedure (in brief).

We used XXX software to extract audios from mp4 videos.

Programming languages, libraries, and frameworks used (in brief)

Python3. Tensorflow.

Opensource used

- <https://github.com/MITESHPUTHRANNEU/Speech-Emotion-Analyzer>
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Describe your plans to be done by the final day of Hackathon (in detail).

(What kinds of methods, datasets, and opensource codes to be used)

QIA Software Development Hackathon 2019

Competition 1 – Track 2: Face emotion recognition
Classification methods used to predict speech emotion (in detail)
Datasets used (in brief)
Describe your pre-processing procedure (in brief).
Programming languages, libraries, and frameworks used (in brief)
Opensource used
Describe your plans to be done by the final day of Hackathon (in detail).

QIA Software Development Hackathon 2019

Competition 1 – Track 3: Multi-modal emotion recognition
Classification methods used to predict speech emotion (in detail)
Datasets used (in brief)
Describe your pre-processing procedure (in brief).
Programming languages, libraries, and frameworks used (in brief)
Opensource used
Describe your plans to be done by the final day of Hackathon (in detail).

QIA Software Development Hackathon 2019

Competition 2 – Emotional conversational agent
Methods used to build emotional chit-chat bot (in detail)
Datasets used (in brief)
Describe your pre-processing procedure (in brief).
Programming languages, libraries, and frameworks used (in brief)
Opensource used
Describe your plans to be done by the final day of Hackathon (in detail).