**Task 8.1P Answer sheet**

Fill in the required results (numerical values, visualisations).

**Notes**:

* Examples (if any) need to be replaced by your results.
* Missing any required results will result in a re-submission.

**1. Visualisation of MFCC features of the following speech files using the mfcc\_extraction method.**

|  |
| --- |
| **Filename:** EmotionSpeech/Train/Angry/03-01-05-01-01-01-01.wav |
|  |

|  |
| --- |
| **Filename:** ' EmotionSpeech/Train/Calm/03-01-02-01-01-01-01.wav' |
|  |

|  |
| --- |
| **Filename:** ' EmotionSpeech/Train/Happy/03-01-03-01-01-01-01.wav’ |
|  |

|  |
| --- |
| **Filename:** 'EmotionSpeech/Train/Sad/03-01-04-01-01-01-01.wav’ |
|  |

**2. Emotion recognition performance (overall accuracy, per-class accuracy, and confusion matrix) with different numbers of mfcc features**

|  |  |  |  |
| --- | --- | --- | --- |
| **num\_mfcc** | **Overall accuracy** | **Per class accuracy** | **Confusion matrix** |
| 10 | 0.656 | Angry: 0.62, Calm: 0.81, Happy: 0.56, Sad: 0.62 | [[26 0 6 0]  [ 2 18 8 4]  [10 0 20 2]  [ 3 6 3 20]] |
| 12 | 0.664 | Angry: 0.62, Calm: 0.81, Happy: 0.59, Sad: 0.62 | [[26 0 6 0]  [ 2 19 8 3]  [10 0 20 2]  [ 3 6 3 20]] |
| 14 | 0.664 | Angry: 0.62, Calm: 0.81, Happy: 0.59, Sad: 0.62 | [[26 0 6 0]  [ 2 19 8 3]  [10 0 20 2]  [ 4 6 2 20]] |
| 16 | 0.656 | Angry: 0.62, Calm: 0.81, Happy: 0.56, Sad: 0.62 | [[26 0 6 0]  [ 2 18 8 4]  [10 0 20 2]  [ 4 6 2 20]] |
| 18 | 0.633 | Angry: 0.62, Calm: 0.81, Happy: 0.47, Sad: 0.62 | [[26 0 6 0]  [ 2 15 11 4]  [10 0 20 2]  [ 3 6 3 20]] |
| 20 | 0.641 | Angry: 0.62, Calm: 0.81, Happy: 0.50, Sad: 0.62 | [[26 0 6 0]  [ 2 16 11 3]  [10 0 20 2]  [ 3 6 3 20]] |