|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Length  (m:s) | Sample rate (Hz) | File/ audio format | composer | Bits per second  (kbps) | creator | Song name |
| blues | 3:18 | 44100 | .wav  .mp3 | n/a | 124 | backtoblues | Somebodys calling my name |
| dance | 2:05 | 48000 | .wav  .mp3 | n/a | 128 | Aliveway | Good day |
| pop | 2:19 | 44100 | .wav  .mp3 | n/a | 124 | Its vicious kicks | Aaayyyooo  (with vocals) |

**Describe (max 200 words) at least one advantage of a time-frequency analysis over a waveform-based analysis. Provide at least one example of the identified advantage by referencing a specific subpart of the output from Task 2.1**

The most key advantage that time- frequency analysis has over a waveform-based analysis is that it is much simpler in terms of being able to extract the information you need. A spectrogram is perfect in showing more data on the notes of the piece. This is due to the fact that a note can be found by looking at the frequency of the song, which is obvious within a spectrogram. This makes it much more comparable when being used to compare different songs, possibly within different genres. This potentially allows for the mean note of a song to be used in comparison to other songs. Waveform based analysis however is much more difficult to read, and the information is much harder to quantify due to the nature of a waveform.