## Notes

Q: How could we implement mood analysis on the user's listening history?

- Use characteristics of listening history to develop an algorithm that will map the listening characteristics to certain moods
- How (if at all) will this algorithm differ from the movie recommendation?
    - Similar in terms of what metrics it uses, but will implement a different algorithm
    - For example, where the movie algorithm might recommend a "romance" movie, the mood of the listening history that led to this recommendation could be either happy or sad
    - Movie genre is not in direct correlation to mood
- https://sites.tufts.edu/eeseniordesignhandbook/2015/music-mood-classification/

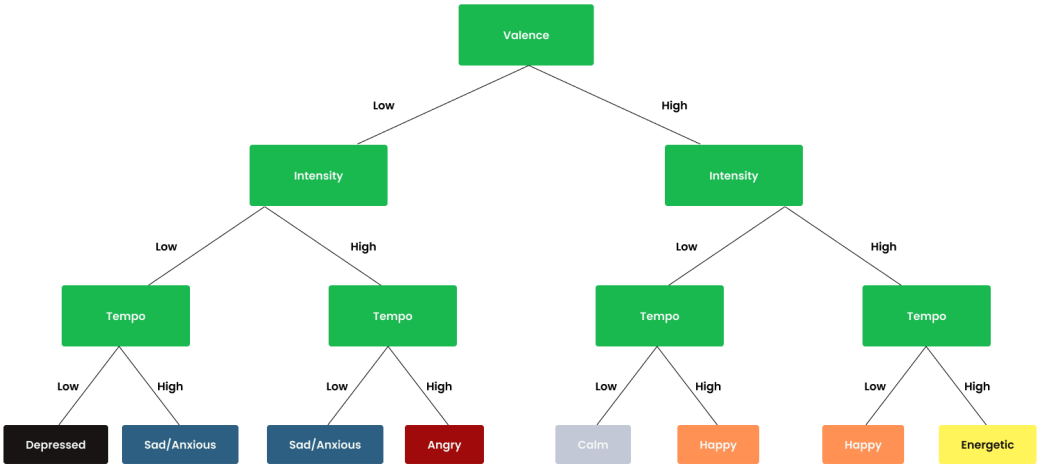
Q: How could we display the mood analysis results?

- Change background color to "match" the mood
    - Examples
        - Sad mood = dark blue
        - Energetic mood = orange
        - Peaceful Mood = light blue/green

## Movie Mappings

| MovieGenres | **1,2** | | **4,5** |
|---|---|---|---|
| **Acousticness** | Action, Adventure, Thriller, Sci-Fi | | Romance, History, Family |
| **Danceabiity** | Horror, War, Documentary, Crime | | Musical, Family, Sci-Fi, Fantasy |
| **Energy** | Romance, Drama, Mystery | | Adventure, Action, Thriller, Sci-Fi, Fantasy |
| **Liveness** | Disregard if low | | Documentary, History, Musical |
| **Loudness** | Romance, Family, Mystery | | War, Action, Horror |
| **Speechiness** | Disregard if low | | Documentary, History |
| **Valence** | Horror, War, Drama, Crime | | Comedy, Romance, Family |

## Potential Mood Algorithm #1




## Potential Mood Algorithm #2

Follows the algorithm for movie mappings

| | 1, 2 | | 4, 5 | |
|---|---|---|---|---|
| Metrics | Mood | Corresponding Genres | Mood | Corresponding Genres |
| Acousticness | Energetic | Action, Adventure, Thriller, Sci-Fi | Calm | Romance, History, Family |
| Danceability | Serious | Horror, War, Documentary, Crime | Energetic | Musical, Family, Sci-Fi, Fantasy |
| Energy | Serious | Romance, Drama, Mystery | Energetic | Adventure, Action, Thriller, Sci-Fi, Fantasy |
| Liveness | Disregard if low | Disregard if low | Serious | Documentary, History, Musical |
| Loudness | Calm | Romance, Family, Mystery | Serious | War, Action, Horror |
| Speechiness | Disregard if low | Disregard if low | Serious | Documentary, History |
| Valence | Serious | Horror, War, Drama, Crime | Happy | Comedy, Romance, Family |

## Potential Mood Algorithm #3

Direct mapping of genre to mood

| | | |
|---|---|---|
| **Action** | Dynamic | Energetic |
| **Adventure** | Energetic | |
| **War** | Serious | Serious |
| **Drama** | Serious | |
| **Crime** | Uneasy | |
| **Documentary** | Curious | |
| **Thriller** | Anxious | |
| **History** | Pensive | |
| **Horror** | Tense | |
| **Family** | Pleasant | Happy |
| **Fantasy** | Whimsical | |
| **Comedy** | Funny | |
| **Musical** | Lively | |
| **Romance** | Loving | Loving |
| **Sci-Fi** | Futuristic | Futuristic |
| **Mystery** | Mysterious | Mysterious |

## Final Decision

After exploring possibilities that follow the movie mapping algorithm, and that map the genre directly to the mood, I think it would be best to work more on the first algorithm possibility, which will implement a new algorithm to determine the mood independent from the movie genres.