Predicting Album Artwork Colors

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Narrative Paragraphs

The album artwork is the first thing you look at when you discover a new song or album and therefore can have a massive impact on your initial thoughts on the music before you even start listening to it. Artwork can match the mood of the songs within the album and show to the listener what the artist thinks they should be feeling while they are listening. One major difference between album art covers is the predominant color that appears in the image. Different colors have the ability to evoke different emotions in people as they are viewing it. For example, the color red can evoke feelings of lust, warmth, love, romance, excitement or intensity while an image with predominant color white can call up feelings of peace, hope, purity, sense of space, innocence or cleanliness [1]. These different colors can affect the thought process of the listener and what they think of it, which can spread to others as well.

As artists craft their album, emphasis on cover art is considered a great deal. Cover art has changed throughout the years and throughout genres. Cover art represents the decade and the feelings of the artists. In the early 60s cover art represented war and civil rights [2]. Country music artists tend to evoke feelings of the country with cowboy hats and red boots for people to easily identify the genre. Some artists removed their name or album title on their art to show ownership and notoriety.

Hypothesis

The album art color for song albums can accurately predict the genre of a song at a rate greater than 50%.

Modeling Approach

Previous research has been conducted on classifying movie genres based on the movie's poster. Discussion in different communities sparked regarding the overwhelming popularity of blue and orange in big budget movie posters, as well as the different color schemes for different genres [3]. Blue and yellow were popular for thrillers, for example. Along with the color, other features of the posters such as facial expression were noted to be different among genres. To create such predictive models, students from CS229 and CS230 at Stanford University have utilized various Convolutional Neural Networks (CNNs) with varying architecture. What this research has found is that such models, given the movie's poster, were able to correctly predict the movie's genre roughly 80% when predicting one genre [4]. In addition, the research found that using CNNs led to more accurate predictions, as opposed to other modeling methods such as kNN [5]. Based on the results of prior research, we will also be using a CNN as our modeling approach, with the specific architecture to be determined later. We will be conducting a similar analysis to these groups, except with album covers predicting genre instead of movie posters.

References

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