Storify: Music Suggestion Model for Social Media Stories

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INTRODUCTION

In the era of digital storytelling, social media platforms like Instagram, Facebook, and WhatsApp have become the canvas for personal expression, with stories being one of the most popular features. A crucial aspect of these stories is the integration of music, which significantly enhances the emotional and aesthetic appeal of the content. However, selecting the appropriate background music that complements the visual narrative is often challenging for users, leading to a less engaging viewer experience. This proposal outlines the development of "Storify," a model designed to automate background music selection for social media stories based on visual content analysis.

PROBLEM STATEMENT

The primary problem identified is the difficulty in selecting suitable background music that matches the mood and theme of the visual content in social media stories. This challenge stems from the vast array of available music choices and the nuanced understanding required to match music with visual themes accurately.

Significance

Addressing this problem is crucial for enhancing user engagement and satisfaction on social media platforms. Music significantly influences the emotional impact and overall engagement of stories; choosing a background track is a pivotal aspect of storytelling. An automated, intelligent solution can vastly improve the storytelling experience, increasing viewership and making it more immersive and emotionally resonant.

LITERATURE REVIEW & NOVELTY

Existing works in multimedia retrieval and recommendation systems have laid the groundwork for content-based recommendation algorithms, including visual content analysis for music recommendation. For instance, several studies have explored image recognition techniques to recommend music based on the visual atmosphere of photographs. However, these solutions often need to account for the specific context of social media stories or the unique demographic preferences of users. Our proposal, Storify, distinguishes itself by focusing specifically on the context of social media stories and incorporating demographic insights into the recommendation process. This tailored approach ensures that the music recommendations and the user's demographic preferences are contextually appropriate, a dimension less explored in existing solutions.

1. The paper explores the intricacies of music preferences in adulthood, highlighting the pivotal role of emotional engagement and the influence of technological advancements on music interaction (Greasley & Lamont, 2006). It emphasizes the diverse listening habits among adults and the significance of music in emotional regulation and social contexts. This research is crucial for designing software that recommends music for social media posts, aligning with individual tastes and prevailing trends while considering the psychological impact of music on mood and social dynamics.
2. This study delves into the connection between personal values and music preferences, presenting an innovative approach to enhance music recommender systems. Interviewing 22 participants establishes a pioneering map linking personal values to music tastes, revealing that while personal values significantly influence musical preferences, they are not the sole determinants. The findings highlight the dominance of specific values, particularly 'Openness to Change,' suggesting a potential pathway for crafting more personalized, value-based music recommendation systems.

3. This research explores machine learning techniques, specifically k-NN and FSSE classifiers, for predicting music preferences in multimedia information retrieval. Analyzing audio signals and applying feature selection, the system aims to recognise user tastes, primarily influenced by music genre preferences. However, the study finds that classifier performance varies with user profiles and is only moderately better than random guessing. It also notes that while some feature selection strategies were investigated, they could have significantly enhanced accuracy, suggesting the challenge lies in effectively capturing the subjective nature of music taste.
4. The study scrutinizes the significance of music for adolescents, mainly focusing on their listening and performance habits, unraveling the reasons behind these musical engagements (North & Hargreaves, 2010). It highlights music's role in adolescents' identity formation and emotional support. It offers valuable insights for a software designed to recommend music for social media content, ensuring selections resonate with the youth's preferences and the emotional undertones of their social postings.

PROPOSED METHODOLOGY

Addressing the identified problem:

Storify will employ a combination of image recognition algorithms and audio indexing techniques. The methodology involves the following steps:

- ***Image Analysis:*** Employing computer vision techniques to analyze the content of images uploaded to social media stories, identifying key elements such as setting, mood, and potential demographics.
- ***Music Matching:*** Utilizing the Spotify Web API to index music tracks that match the analyzed image characteristics, taking into account both mood and demographic preferences.
- ***Recommendation Algorithm:*** Develop a recommendation system that intelligently suggests a list of suitable tracks based on the analysis, leveraging machine learning models for improved accuracy over time.

EVALUATION STRATEGY

The effectiveness of Storify will be evaluated through a combination of quantitative and qualitative measures, including:

- ***User Engagement Metrics:*** Analyzing the impact of recommended music on viewer engagement metrics such as view time, interaction rates, and user feedback.
- ***Accuracy Assessment:*** Comparing the system's music recommendations with human-selected choices to assess accuracy and relevance.
- ***User Satisfaction Surveys:*** Collecting user feedback on the relevance, diversity, and satisfaction with the recommended music options.

CONTRIBUTION

The potential contributions of this work include A novel approach to integrating visual content analysis with music recommendation, specifically tailored for the context of social media stories. An enhanced storytelling experience on social media platforms, leading to increased user engagement and satisfaction. Contributions to the fields of multimedia retrieval and recommendation systems, particularly in the context of social media content.

CONCLUSION

Storify represents a significant step forward in integrating music and visual content on social media platforms. By addressing the challenge of selecting appropriate background music for stories, this project has the potential to enhance the storytelling experience, making it more immersive, engaging, and emotionally resonant. Through cutting-edge image recognition and music recommendation techniques, Storify aims to redefine how stories are told and experienced on social media.

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