Data Science Team Project

Final Report

Team 1

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1. Motivation and goal

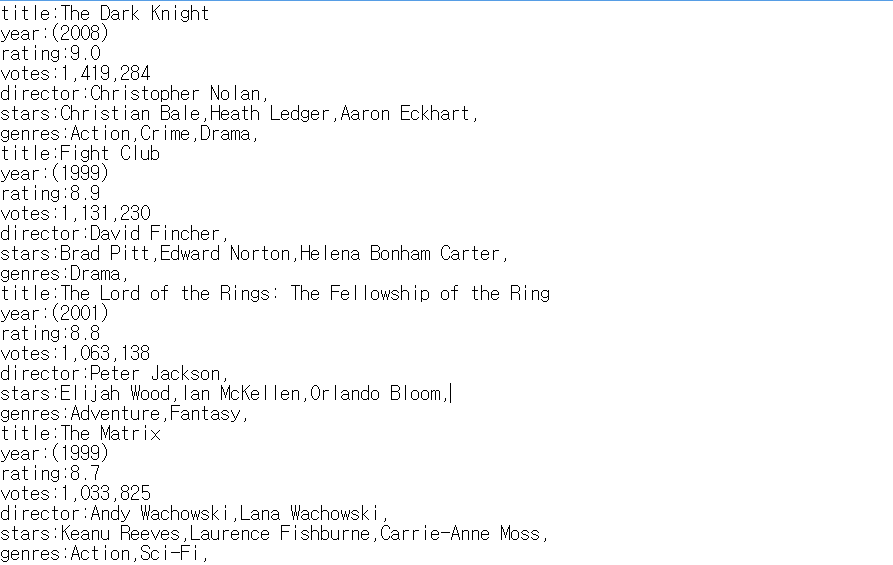
We thought that the decision making process would not be much different in the area of art and also there must be common factors feeling something is beautiful. We call it ‘taste’ and we believe the taste of person applies in the same way when they choose what to buy. In this project, we first focused on the relationship between the brand and art. In this case, art refers to movie, music, painting, pictures and etc.

Our goal is to find the preference of brand from one’s art works such as music, movie, and paintings. By making it to application, we want to extract the best brand related to the one’s favorites. With this application, we can suggest the company to place the pictures that customers most likely to love, play the music in the store or build any other marketing plans they can do with the art works. It would improve the effectiveness of advertisements, make people stay longer in the stores, and results in an increase of the possibility to spend money. I’ll explain in detail later.

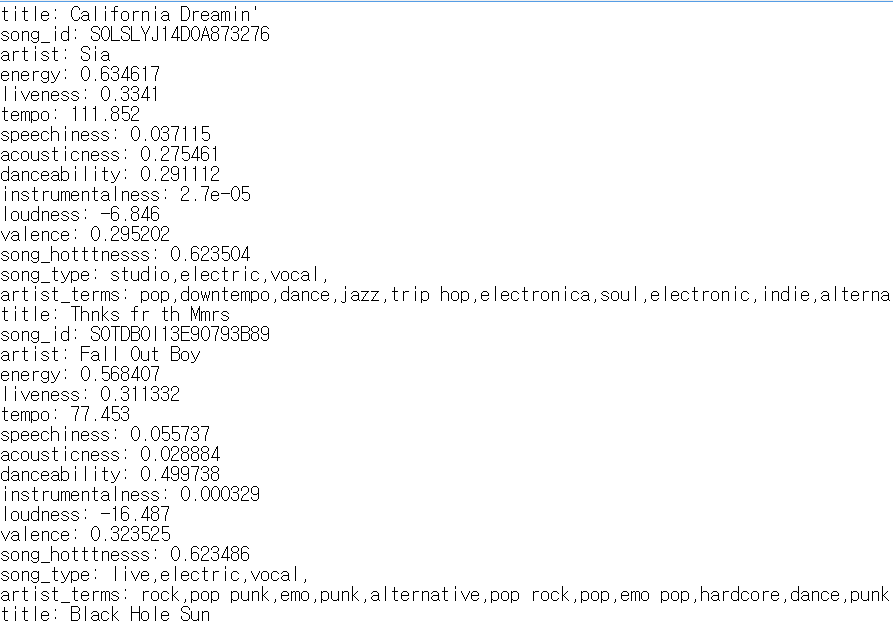
1. Implementation

* Language: Python
* Tool: ipython notebook, visual studio code, sublime
* Version control tool: github (https://github.com/inyeoplee77/DataScienceProject)
* Database: iMDB(6099 movies), Apparel search(342 brands)
* API: Instagram api, The Echo nest(3256 musics)
* Data machine learning model: SVM (<http://scikit-learn.org/stable/modules/svm.html>)

1. Procedure
   1. Construct Movie DB, Music DB, and Brand DB
      1. iMDB : iMDB has a great database of movies. It is an online database of information related to films, television programs, and video games, and so on. We could extract movie data such as title, rating(0.0~10.0), votes, director, stars, genres.



* + 1. The Echo Nest: When we first tried to get music data from Discog api, allmusic website, there was many problems. With using Discog api, there was protocol message problem which we couldn’t solve until discovering new method to get music database. With using allmusic.com website, it was quite assignment-like process, but we couldn’t get valuable data because of the shortage of data of old musics. Finally, we got to know the echo nest api, which has quite big database with a lot of features that we were looking for. Features we used in this project are Title, Song\_id, Artist, Energy, Liveness, Tempo, Speechiness, Acousticness, Danceability, Instrumentalness, Loudness, Valeance, Song\_hotttnesss, Song type, Artist\_terms



* + 1. Apparel search: In Apparel search website, we got the list of apparel brands.
  1. Search Instagram user id after searching movie or music tags
  2. Search brand name from each user id
  3. Train the data with SVM model
* The reason why we chose SVM model instead of other models such as neural network model is that we’ve found out it takes too much time for training and needs to decide number of layers and nodes.
  1. Make application
  2. Test

1. Result
2. Application area

With this application, many apparel companies can make advertisement and make many people get know about their product. By analyzing preference of people by inserting titles of movie and music, there are many things to do. I’ll introduce few specific examples.

First, imagine you are window shopping in the shopping mall with many clothes stores. When you walk across the Abercrombie & Fitch store, you heard your favorite song, which make you stop by the store. It would make people buy their products and consequently, it will connect to increase of sales.

Second, these days we can see a lot of product placement advertisement, as known as PPL. Sometimes, PPL seems weird because the product seems not relevant to the original soap drama, movie, and so on. Therefore, if advertisement agency can analyze the relation between their brand and preference of the program, they can easily advertise their products. People would prefer the product of the brand which they like.

Third, collaboration of art and movie will be amazing. To be specific, assume the result shows that some people who like movie ‘The Avengers’ series like the apparel brand ‘Adidas’. Actually, there are already products of ‘Adidas’ collaborated with ‘The Avengers’. However, if more brands which people couldn’t even imagine collaboration of two brands got collaborated and many awesome products been made, it couldn’t be better than anything else for their fans.

With these specific examples, the importance of finding out the relation between art and brands is evident. Considering the increasing scale of the advertisement, fusion of different element with brands will pioneer new area of advertisement of brands.