SWS3004 – Team No.33

Film U : Film U,Feel U

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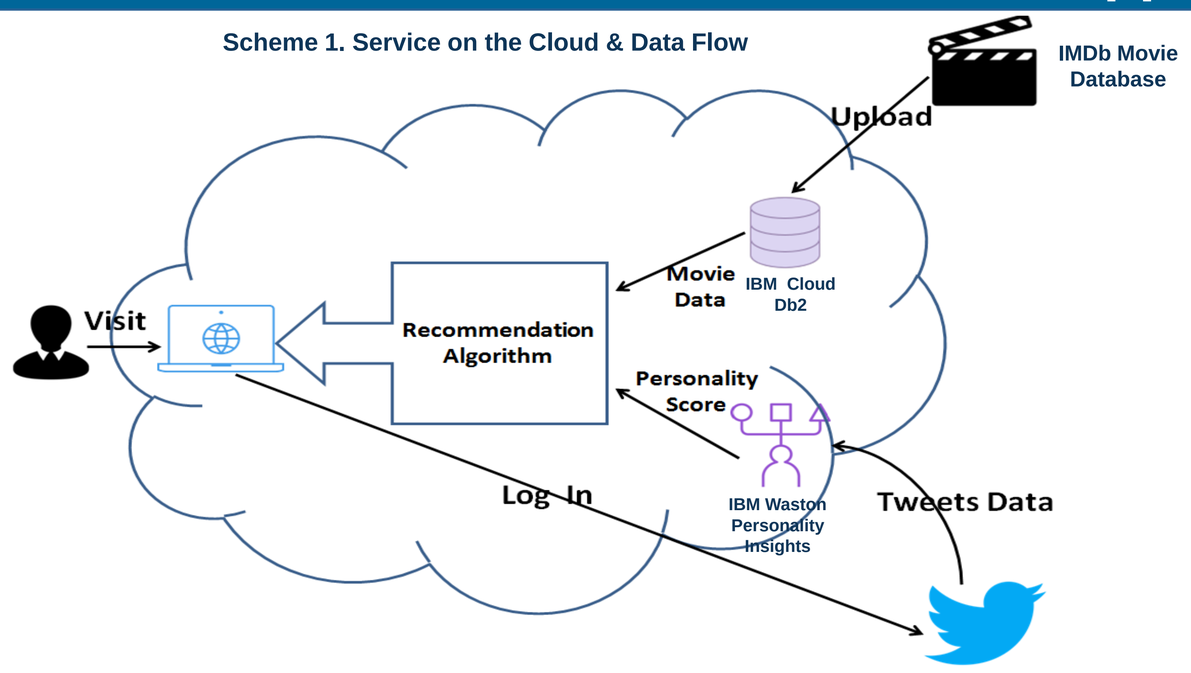
Motivation and Objective

Motivation: Giant movie website don't know you at all ! If you visit IMdb or Rotten Tomatoes , they may provide you with a wide range of fantastic movies to choose from, however it is likely that you completely take no interest in those movies ! Although they have powerful movie database and valuable movie score surveyed among mass audience , they totally haven't take your own personality and taste into consider ! To make our movie recommendation system more personal and individual-oriented , we apply user's tweets ,which has been already ubiquitous , to analyse his personality ,based on which we recommend movies he may enjoy.

Objective: We intend to design a movie recommendation system using your twitter social network personality .Our recommendation not only can provide every visitor with movies most suitable for his own taste and personality,but also enable users to know themselves better in terms of personality. That is **" Film U,Feel U ".**

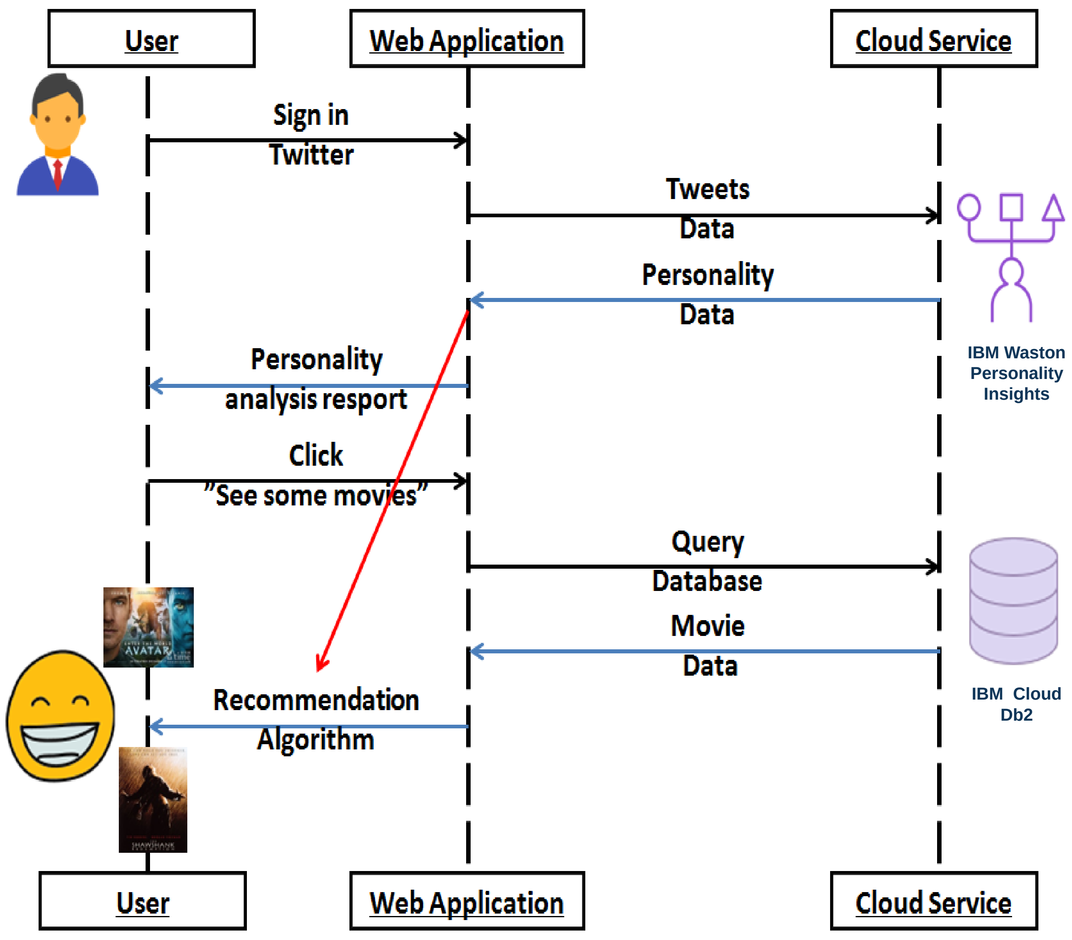
Approach

Scheme 1. Service on the Cloud & Data Flow



- ✔ Collect user's tweets through Twitter API
- ✔ Perform personality analysis using IBM Waston Personality Insights and retrieve results .
- ✔ Retrieve movie data stored in a IBM Cloud Db2 database previously uploaded from local laptop
- ✔ Perform our recommendation algorithm based on movie data and personality data & Give each movie a personality-match score
- ✔ Show users movies they may enjoy and other related information on web app page

Figure 1. Interactions Between Frontend & Backend



Implementation

- ✔ Write our web application on local laptop
- ✔ node.js on backend ； Javascript ,HTML and CSS on frontend
- ✔ Push the app to the Cloud using CloudFoundry CLI
- ✔ Run on a cloud-based web server using node.js boilerplate

Scheme 2. Type of technology used for the project

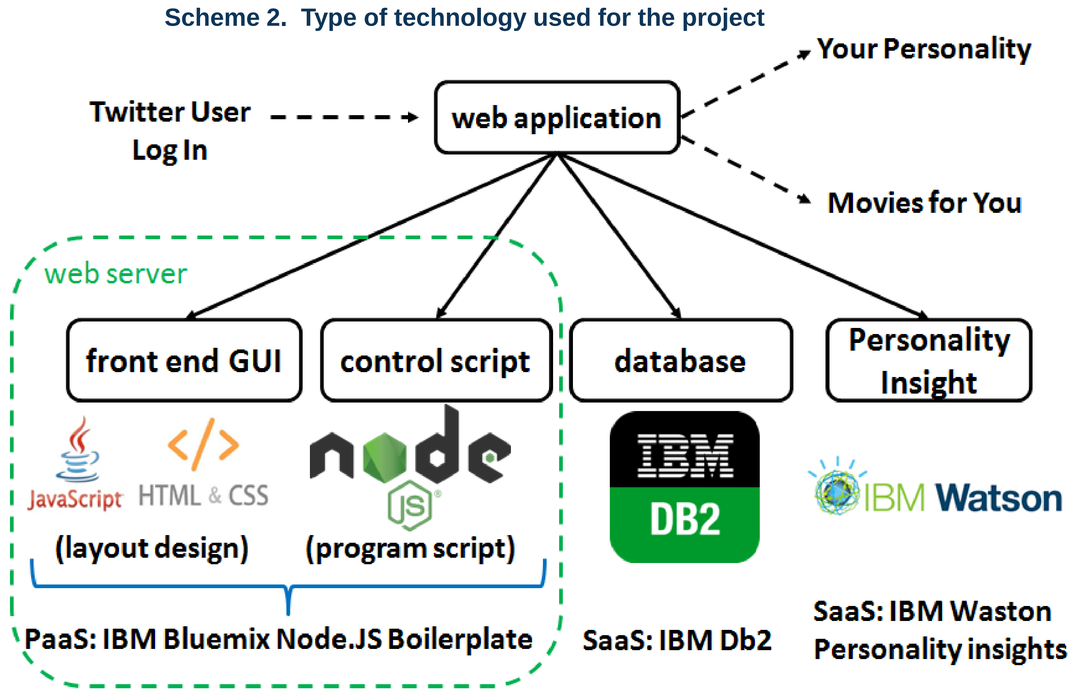
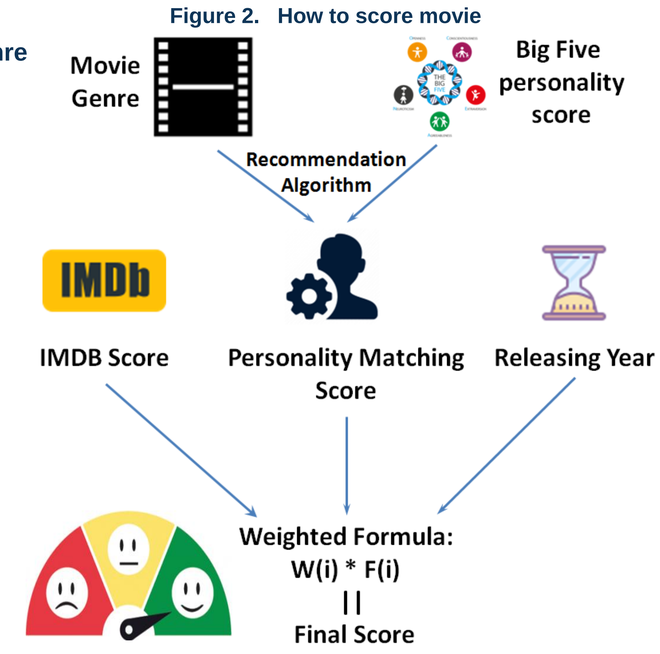


Table 1. Matching matrix between Big Five personality score and movie genre

	All users					
MOVIE GENRE	OPE	CON	EXT	AGR	NEU	#users
action	3.87	3.45	3.57	3.58	2.72	2488
adventure	3.91	3.56	3.54	3.68	2.61	179
animation	4.04	3.22	3.26	3.35	3.02	85
cartoon	3.95	3.33	3.49	3.57	2.81	957
comedy	3.88	3.44	3.58	3.60	2.75	3969
cult	4.27	3.10	3.45	3.40	3.16	38
drama	3.99	3.43	3.66	3.60	2.86	905
foreign	4.15	3.46	3.47	3.54	2.81	112
horror	3.90	3.38	3.52	3.47	2.91	2284
independent	4.31	3.59	3.51	3.55	2.69	104
neo-noir	4.34	3.35	3.33	3.37	2.97	92
parody	4.13	3.36	3.35	3.28	2.73	25
romance	3.84	3.48	3.62	3.62	2.85	776
science fiction	3.99	3.55	3.33	3.57	2.73	215
tragedy	4.40	3.34	3.27	3.52	3.11	26
war	3.82	3.51	3.49	3.50	2.71	148
	4.05	**3.41**	**3.46**	**3.51**	**2.84**	

Cantador I, Fernández-Tobías I, Bellogín A. Relating personality types with user preferences in multiple entertainment domains[C]//CEUR WorkshopProceedings. Shlomo Berkovsky, 2013

Figure 2. How to score movie



Personality-based recommendation algorithm :

- ✔ If a certain movie have certain genre tag , the corresponding matching score for certain personality dimension will be added
- ✔ calculate the **similarness(matching degree)** of above-mentioned added score and user's personality score previously obtained

Conclusions

Lessons :

- ✔ Obtain better understadning of key principles of cloud computing concepts, models, technologies and its application for big data
- ✔ Master how to develop web-based big data cloud application using IBM Paas and Saas Cloud Services
- ✔ Familiar with frontend language JavaScript , HTML&CSS , as well as backend language Node.js
- ✔ Know how to manage time , to design & execute project , and to collaborate with teammates from different academic background

Limitations:

- ★ The design of frontend is not so artistic , and the Web-page is not user-friendly enough
- ★ Not incorporate user's profile such as user's age , nationality , perferred language etc. into our movie recommendation algorithm
- ★ Not consider different user scenario such as watching movies with friends , family,couples or just by himself
- ★ It is not so convincing to judge one's personality only based on his tweets posted previously