



University of Jeddah

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Fundamentals of AI| CCAI-221

youtuber suggestion expert system

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Youtuber

Recommendation Decision System

Idea description:

An expert system that suggests a youtuber according to the user's preferable. What is distinguish our system, is that the user will answer multiple questions so the system can recommend a proper youtuber that suits their needs.

The problem:

What happens when we are trying to search for a youtuber to achieve a specific matter, that we could face some troubles and consumes time in finding a suitable youtuber.

The solution:

Our system is a knowledge-based system, so depending on its knowledge, it can make a decision for the best youtuber upon the user's answers. The system will ask the user about the field he wishes to find a youtuber for, and the preferable gender and language. Also, the system will suggest some common categories to make it easier for the user to choose one of them. The system's knowledge is full of information for different YouTube fields, Arabic and English content for both genders, so the system can match users' answers with facts to give them proper suggestions.

AI approach used to solve the problem:

1- Depth-first search:

The system will go deeply on the entire space and match the user's answers with facts until it finds the correct suggestions, if it doesn't find it, the solution will be dead end.

Some examples to show how depth-first search works:

- Example one: interest (X, games), gender(X, male), language(X, arabic). In this example it will go to games interest, take the first youtuber which is BandaritaX, then check BandaritaX gender if it is male which is so it will match, finally it will check BandaritaX language if it is Arabic which is so it will match and declare the goal. This example is the best case that could occur.



- Example two: interest (X, games),gender(X, female),language(X, arabic).
In this example it will go for games interest, take the first youtuber which is BandaritaX, then check BandaritaX gender and it will find that he is not female and it will not match so the algorithm will do it again. take the second youtuber (note: we still in games interest) which is Meshael, check Meshael gender if it is female which is so it will match , finally check Meshael language if it is Arabic which is so it will match and declare the goal .

2- Thinking rationally (laws of thoughts):

Based on brief knowledge and logical rules to recommend the optimal suggestion.

3- Acting rationally (rational agent):

The system will try to generate the optimal suggestion or the best outcome and the most sufficient one.

Facts formatting:

As we mentioned, our system is knowledge-based so here is how we formatted the facts in a matter of the sufficient use of knowledge.

The facts we used:

- 1- Channel: hold channel link.
- 2- Interest: hold channel field.
- 3- Language: clarify channel language.
- 4- Gender: clarify the youtuber's gender.

Some examples:

channel(bandaritaX,'https://youtube.com/@BanderitaX').

interest(bandaritaX,games).

language(bandaritaX,arabic).

gender(bandaritaX,male).



Theoretical background:

The youtubers are chosen based on their interest and the fields they are popular on, so that we can match the user's interest with the youtuber interest to find the proper one.

- **Games:**
We selected the gamers (Bandarita, Meshale , Sensi, Sommerset) who have more than 100k subscribers and have an interest in playing different kinds of video games such as(shooting, simulation, sports games and strategy games).
- **Art:**
(Alpay Efe, Mako, Nour Yasin, Lara Murat) are professional painters who have a passion for art and give tips to develop hand painting for others. So we found them the best art content creators.
- **Beauty:**
(Noura Bo Awadh, Hindash, Kelly Strac) are well-known makeup artists who worked with huge companies and famous characters and launched their own makeup brands.
- **Food:**
(Al-Walled and Al-Faisal, Nick DiGiovanni, Dhuha, Tee) are popular in food tasting and rating, give cooking recipes for delicious dishes.
- **Fashion:**
(Summer Shaker, Hespokestyle, Kerin Wang, Ahmed Mahmoud) are interested in styling and giving people advice and inspiration on how they can dress well to look perfect in their outfits.
- **Travel:**
(Christianne, Jason Billam, Ahmad Aldurra, Lulu Alkhataf) are travelers that have traveled around the world and explored a lot of adventures to give their followers the recommendation from destinations across the globe.
- **Plant:**
(Afafe ben Abdeslam, Mahdi, jenry, Ben) are passionate gardeners who love taking care of gardens, plants, and grow their own food, so they have a lot of information about how to deal with different kinds of plants.
- **Photography:**
(David Manning, Noor, Kelly Brown, Ahmed Saeed) have the knowledge about photography and cameras so they can inform people on how they do better at taking pictures.
- **Sports:**
(Doha Dergham, Jordan Yeoh, Pamela Reif, Younis Alaraj) are sport coaches who have a previous experience as coaches in the gym, on their channels they do exercise for different body parts.
- **Vlogs:**
(Thunyyan Khalid, Alex, Shaden,Yuyan) are sharing diaries, filming vlogs, and entertainment content, some of them have won content creation prizes.



All categories we used in the system are the most commonly searched categories as <https://www.searchenginejournal.com/top-youtube-searches/374859/> mentioned.

We organized them into 10 fields which are:

- 1- Beauty
- 2- Art
- 3- Food
- 4- Fashion
- 5- Videogames
- 6- Vlogs
- 7- Travel
- 8- Sports
- 9- Plants
- 10-Photography

we chose the most popular youtubers according to <https://www.semrush.com/blog/most-searched-on-youtube/> and <https://hypeauditor.com/top-youtube-all-saudi-arabia/> dashboard that clarifies the rank of youtubers in different fields.



Factor table:

Interest	Name	Language	Gender	Channel link
Art	Alpay Efe	English	Male	https://youtube.com/@AlpayEfe
	Mako	English	Female	https://youtube.com/@Makoccino
	Nour Yasin	Arabic	Male	https://youtube.com/@NourYasinArt
	Lara Murat	Arabic	Female	https://youtube.com/@LaraMurat
Beauty	Noura Bo Awadh	Arabic	Female	https://youtube.com/@noraboawadh2969
	Hindash	English	Male	https://youtube.com/@Hindash
	Kelly Strac	English	Female	https://youtube.com/@KellyStrack
Food	Al-Walled and Al-Faisal	Arabic	Male	https://youtube.com/@Alwaleed_alfaisal
	Nick DiGiovanni	English	Male	https://youtube.com/@NickDiGiovanni
	Dhuha	Arabic	Female	https://youtube.com/@Dhuha_mukbang
	Tee	English	Female	https://youtube.com/@EatSpicywithTee
Fashion	Summer Shaker	Arabic	Female	https://youtube.com/@summer.shaker
	Hespokestyle	English	Male	https://youtube.com/@hespokestyle
	Kerin Wang	English	Female	https://youtube.com/@KerinaWang
	Ahmed Mahmoud	Arabic	Male	https://www.youtube.com/@ahmed.mahmoud
Games	BandaritaX	Arabic	Male	https://youtube.com/@BanderitaX
	Meshael	Arabic	Female	https://www.youtube.com/@MeshaelMR
	Sensei	English	Male	https://youtube.com/@SENSEI1
	Sommerset	English	Female	https://www.youtube.com/@Sommerset1
Plant	Afafe ben Abdeslam	Arabic	Female	https://youtube.com/@afafebenabdeslam911
	Ben	English	Male	https://youtube.com/@GrowVeg
	Mahdi	Arabic	Male	https://youtube.com/@COOLRozelaFlowers
	Jenny	English	Female	https://youtube.com/@GardeningwithCreekside
Photography	David Manning	English	Male	https://youtube.com/@DavidManningvlog
	Kelly Brown	English	Female	https://youtube.com/@kellybrownphotographer
	Ahmed Saeed	Arabic	Male	https://youtube.com/@AhmedSaeedtuts
	Noor	Arabic	Female	https://youtube.com/@user-mn9wz6xz1c
Sports	Doha Dergham	Arabic	Female	https://youtube.com/@dohadergham
	Jordan Yeoh	English	Male	https://youtube.com/@jordanyeohfitness
	Pamela Reif	English	Female	https://youtube.com/@PamelaRf1
	Younis Alaraj	Arabic	Male	https://youtube.com/@younisalaraj9776
Travel	Jason Billam	English	Male	https://youtube.com/@JasonBillamTravel
	Christianne	English	Female	https://youtube.com/@BackpackingBananas
	Ahmad Aldurra	Arabic	Male	https://youtube.com/@PamelaRf1
	Lulu Alkhataf	Arabic	Female	https://youtube.com/@younisalaraj9776
Vlogs	Shaden	Arabic	Female	https://www.youtube.com/@shaden2121
	Thunyyan Khalid	Arabic	Male	https://youtube.com/@toun16
	Yuyan	English	Female	https://youtube.com/@ItsYuyan
	Alex	English	Male	https://www.youtube.com/@AlexLiu1



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