

# Volunteer- recommendation expert system

CCAI 211

A2L

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## Introduction

Volunteer work in the community has become a requirement of contemporary life. Also, through volunteering, you can learn and develop a new skill, enhance your career, and gain new experiences.

## Problem Definition

Most of people face a problem in obtaining volunteer opportunities commensurate with their fields, as they face difficulty in searching and selecting the appropriate authorities, there is no system that cares about volunteer opportunities for university students. Accordingly, a decision was taken to implement a project to enhance and provide volunteer opportunities to support students. The purpose of this application is to facilitate volunteer access to volunteer opportunities in the Kingdom, in line with their fields and skills.

## Project Definition

The purpose of this project is to facilitate volunteer access to volunteer opportunities in the Kingdom, including university students, in line with their fields and skills.

The Volunteer-recommendation expert system will improve knowledge of volunteer opportunities based on skills. Setting up the system will make finding out the right volunteer opportunity fast, straightforward, and reliable.

We are about to do is a small expert system that suggests a volunteering to you based on your skills, and city you live in.

## How dose the Volunteer recommendation expert system work?

A user can interact with a computer to solve a problem using an expert system. Because the expert system can store exploratory knowledge, the proposed system is capable of performing a wide range of tasks. It will come to a conclusion about the appropriate volunteer opportunity based on the user's responses to certain questions asked by the system. The questions give the system an explanation of the user's skills, which helps the expert system know the appropriate volunteer opportunity.

# Factor Table

Skills	Cities	Volunteer opportunity
Caring for people Ability to communicate Time management teamwork Observation and response speed	Jeddah Riyadh Khobar Makkah Abha	Volunteering in hospitals
Caring for animals Treat sick animals Observation and response speed	Jeddah Riyadh Abha	Volunteer at an animal shelter
Caring for people Ability to communicate hiking teamwork proficiency many languages	Makkah	Volunteering during the Hajj season
Time management teamwork	Jeddah Riyadh Khobar Makkah Abha	Volunteer to restore homes
Caring for plants Teamwork hiking	Jeddah Riyadh Khobar Makkah Abha	Volunteer to grow plants

# Queries:

1-

Please answer questions below  
It helps to find best volunteer opportunity for you

Dear volunteer, do you have this skill? caring\_for\_people

yes

Dear volunteer, do you have this skill? ability\_to\_communicate

yes

Dear volunteer, do you have this skill? time\_management

yes

Dear volunteer, do you have this skill? teamwork

yes

Dear volunteer, do you have this skill? observation\_and\_response\_speed

yes

After taking a simple test of your skills, we expect that the right volunteer for you is volunteering\_in\_hospitals

?- suggest.

2-

Volunteer-recommendation expert system  
Please answer questions below  
It helps to find best volunteer opportunity for you

Dear volunteer, do you have this skill? caring\_for\_people

no

Dear volunteer, do you have this skill? caring\_for\_animals

yes

Dear volunteer, do you have this skill? treat\_sick\_animals

yes

Dear volunteer, do you have this skill? observation\_and\_response\_speed

yes

After taking a simple test of your skills, we expect that the right volunteer for you is volunteer\_at\_an\_animal\_shelter

true

?- suggest.

3-

Volunteer-recommendation expert system  
Please answer questions below  
It helps to find best volunteer opportunity for you

Dear volunteer, do you have this skill? caring\_for\_people

no

Dear volunteer, do you have this skill? caring\_for\_animals

no

Dear volunteer, do you have this skill? time\_management

yes

Dear volunteer, do you have this skill? teamwork

yes

After taking a simple test of your skills, we expect that the right volunteer for you is volunteer\_to\_restore\_homes

true

?- suggest.

4-

```

Dear volunteer, do you have this skill? caring_for_people
no

Dear volunteer, do you have this skill? caring_for_animals
no

Dear volunteer, do you have this skill? time_management
no

Dear volunteer, do you have this skill? hiking
yes

Dear volunteer, do you have this skill? teamwork
yes

Dear volunteer, do you have this skill? caring_for_plants
yes

After taking a simple test of your skills, we expect that the right volunteer for you is volunteer_to_grow_plants
?- suggest.

```

5-

```

volunteer_at_an_animal_shelter.
Dear volunteer, do you have this skill? caring_for_animals
yes

Dear volunteer, do you have this skill? treat_sick_animals
yes

Dear volunteer, do you have this skill? observation_and_response_speed
yes

true
?- volunteer_at_an_animal_shelter.

```

6-

```

guessing(X).
Dear volunteer, do you have this skill? caring_for_people
yes

Dear volunteer, do you have this skill? ability_to_communicate
yes

Dear volunteer, do you have this skill? time_management
yes

Dear volunteer, do you have this skill? teamwork
yes

Dear volunteer, do you have this skill? observation_and_response_speed
yes

X = volunteering_in_hospitals
?- guessing(X).

```

7-

```

suggest(V).
What is your city?:
makkah

What is your skill ? :
proficiency_many_languages

proficiency_many_languages
bye!
V = volunteering_during_the_Hajj_season
?- suggest(V).

```

8-

```
suggest(V).
What is your city?:
jeddah
What is your skill?:
proficiency_many_languages
I cant handle your skill
bye!
true
?- suggest(V).
```

9-

```
volunteeringList(V,C).
Enter city name:
jeddah
City jeddah , has volunteering_in_hospitals
C = jeddah,
V = volunteering_in_hospitals
City jeddah , has volunteering_in_hospitals
City jeddah , has volunteering_in_hospitals
City jeddah , has volunteering_in_hospitals
City jeddah , has volunteering_in_hospitals
City jeddah , has volunteer_at_an_animal_shelter
City jeddah , has volunteer_at_an_animal_shelter
City jeddah , has volunteer_at_an_animal_shelter
City jeddah , has volunteer_to_grow_plants
City jeddah , has volunteer_to_grow_plants
City jeddah , has volunteer_to_grow_plants
C = jeddah,
V = volunteering_in_hospitals
C = jeddah,
?- volunteeringList(V,C).
```

10-

```
V = volunteering_during_the_Hajj_season
S = ability_to_communicate,
V = volunteering_during_the_Hajj_season
S = hiking,
V = volunteering_during_the_Hajj_season
S = teamwork,
V = volunteering_during_the_Hajj_season
S = proficiency_many_languages,
V = volunteering_during_the_Hajj_season
S = caring_for_animals,
V = volunteer_at_an_animal_shelter
S = treat_sick_animals,
V = volunteer_at_an_animal_shelter
S = observation_and_response_speed,
V = volunteer_at_an_animal_shelter
S = caring_for_animals,
V = volunteer_at_an_animal_shelter
S = treat_sick_animals,
V = volunteer_at_an_animal_shelter
S = observation_and_response_speed,
?- volunteering(V,_,_S).
```

11-

```
V = volunteer_to_restore_homes
S = teamwork,
V = volunteer_to_restore_homes
S = time_management,
V = volunteer_to_restore_homes
S = teamwork,
V = volunteer_to_restore_homes
S = time_management,
V = volunteer_to_restore_homes
S = teamwork,
V = volunteer_to_restore_homes
S = time_management,
V = volunteer_to_restore_homes
S = teamwork,
V = volunteer_to_restore_homes

(volunteering(V,_,jeddah,_).not(volunteering(V,_,makkah,_))).

V = volunteer_at_an_animal_shelter
V = volunteer_at_an_animal_shelter
V = volunteer_at_an_animal_shelter

?- (volunteering(V,_,jeddah,_),not(volunteering(V,_,makkah,_))).
```

12-

```
S = caring_for_people,
V = volunteering_in_hospitals
S = ability_to_communicate,
V = volunteering_in_hospitals
S = time_management,
V = volunteering_in_hospitals
S = teamwork,
V = volunteering_in_hospitals
S = observation_and_response_speed,
V = volunteering_in_hospitals
S = caring_for_animals,
V = volunteer_at_an_animal_shelter
S = treat_sick_animals,
V = volunteer_at_an_animal_shelter
S = observation_and_response_speed,
V = volunteer_at_an_animal_shelter
S = hiking,
V = volunteer_to_grow_plants
S = teamwork,
V = volunteer_to_grow_plants

?- volunteering(V,_,abha,S).
```



## References:

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- [https://www.imperialcharity.org.uk/application/files/9015/2942/5476/Hospital\\_Welcome\\_Volunteer\\_Role\\_Description\\_FINAL.pdf](https://www.imperialcharity.org.uk/application/files/9015/2942/5476/Hospital_Welcome_Volunteer_Role_Description_FINAL.pdf)
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