

4our People

cuACS Algorithm Presentation

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Algorithm Overview:

Our team implementing the cuACS system has defined fixed attributes and qualities that are critical in coordinating compatible animal to human matches, possibly resulting in an adoption.

Our attributes range from physical and non physical. Without exception every client profile must contain the client's matching preferences.

The values for the attributes that the client is looking for in an adopted animal are stored with each client.

Social

	1	2	3	4	5
	Reclusive		Neutral		Extremely Social

Figure 0.2: Scaled example for preference input

The screenshot shows a web application window titled 'MainWindow'. On the left is a form for entering animal information. On the right is a table titled '4our People' (likely '4 our People') listing animals. Below the table are buttons for 'Clear', 'Save', 'Back', and 'Homepage'.

Animal Information Form:

- Type: Dog
- Breed: Pitbull
- Name: Rex
- Sex: Male
- Age: 2
- Social: 5
- Health: 5
- Diet: 0
- Trained: 5
- Nocturnal: No
- Emotion: 5
- Pet's Worth: 1
- Has Kids: 0
- Allergies: 0
- Stability: 5
- Housing: 3

4our People Table:

	type	breed	name	sex	
1	Dog	Pitbull	Rex	Male	2
2	Cat	Domestic S...	Ziggy	Male	4
3	Cat	Domestic M...	Molly	Male	2
4	Cat	Domestic S...	Ella	Male	2
5	Cat	Domestic M...	Shadow	Female	5
6	Cat	Domestic M...	Stella	Male	3
7	Cat	Domestic M...	Thora	Male	5
8	Cat	Domestic S...	Chico	Female	6
9	Cat	Domestic S...	Augustine	Female	2
10	Cat	Domestic S...	Juniper	Female	1

Figure 0.1 Animal information input page

Choice of Attributes:

These attributes would help the shelter staff determine the animal - client compatibility. Although some of the attributes such as age, diet, training, and allergies are self explanatory, the rest of the non-physical attributes need clarification:

- **Housing:** Some pets require more space than other pets
- **Pet Worth:** Maintenance or luxury of the pet
- **Parental:** Some pets in the shelter have siblings that they are born or raised with
- **Stability:** The independence of a pet

Figure 0.3: Some attributes used

Matching Rules:

Matching preferences given by the clients are synched to certain attributes for our animals.

Rule Number	Justification
R-01	The client is asked for a type of pet to filter out the other irrelevant pets (species and breed).
R-02	The client being active could be associated with the pets' non-physical attributes. Due to the client being active, the adopted pet should be social , healthy and trained .

Figure 0.4: Rough draft on Algorithm rules

From the image to the left, the attributes that are in bold and are what help with the results as the users preferences are filled.

More social and healthy animals that properly respond to key commands (trained) are what an active person, like an athlete may be looking for.

When the client works on preferences each part of client input correlates to a minimum of 2 animal attributes.

The screenshot shows a web application window titled "MainWindow". On the left, there is a form titled "4our People" for creating a new client. It includes an "id" field with a dropdown menu showing "1", a "Name" field with the text "Wilfred James", and an "Address" field with the text "3670 Glory Road". Below these fields are "Save" and "Back" buttons. To the right of the form is a list titled "4our People" with columns for "id", "name", and "address". The list contains five entries: 1 Wilfred James 3670 Glory ..., 2 Mona Lane 2257 Berry ..., 3 Steve Blake 3441 Cemeter..., 4 Josh Rich 2795 Green ..., and 5 Marlee Sparks 4162 Adam... Below the list is a "Clear" button. At the bottom center of the window is a "Homepage" button.

Figure 0.5: Creating new client

Algorithm Justification

- The client is asked for a type of pet to filter out the other irrelevant pets (species and breed).
- If the animal is nocturnal the client can work during the day. The animal would be sleeping during the day and active at night, when the client comes home the animal will be awake.
- Housing of the client would depend on the number and kinds of pets they adopt.

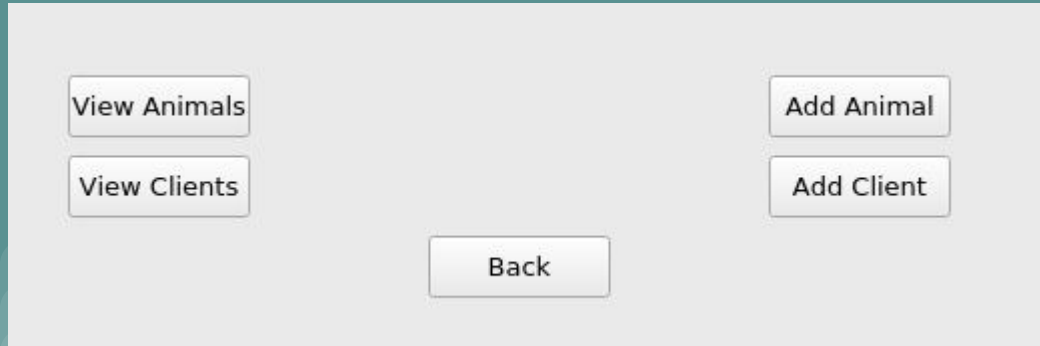


Figure 0.6: Staff menu

These are some of rules justified in finding proper matches.

The cuACS animal-client matching (ACM) algorithm uses uniquely particularly arranged rules for coordinating together animal and client profiles.

In order for a shelter staff to find a compatible match between an animal and a client, the shelter staff should ask the client a set of questionnaires about their pet preferences. The system runs a filter based algorithm to determine the pet that meets most of the client's preferences