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.

Figure 0.1 Animal information input page

Social					
	1	2	3	4	5
	Reclusive		Neutral		Extremely Social

Figure 0.2: Scaled example for preference input

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

Figure 0.5: Creating new client

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.

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.

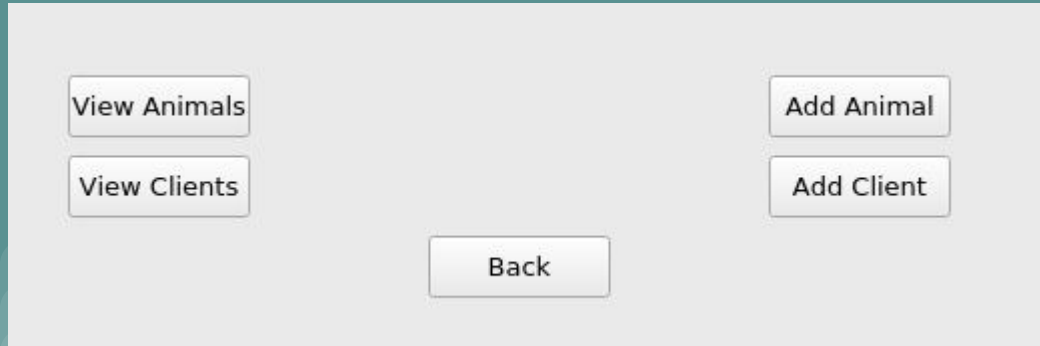- Housing of the client would depend on the number and kinds of pets they adopt.

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

Figure 0.6: Staff menu