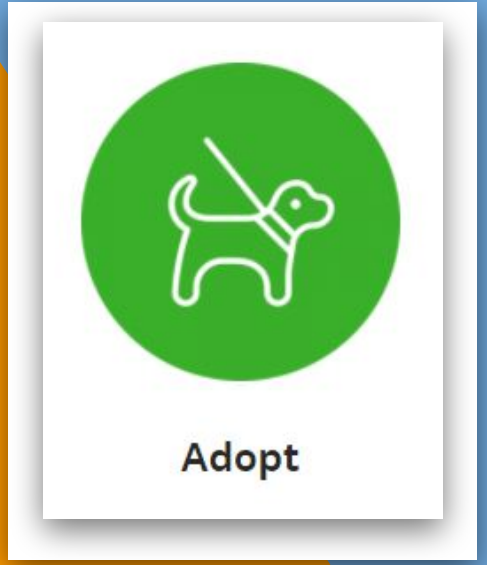
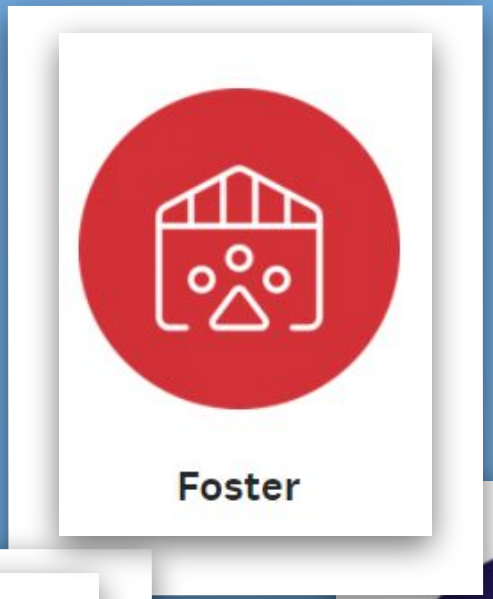
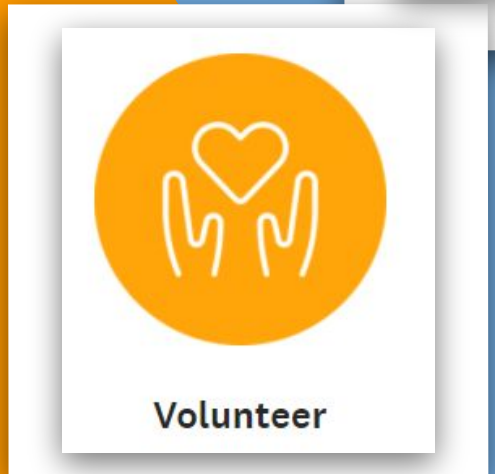
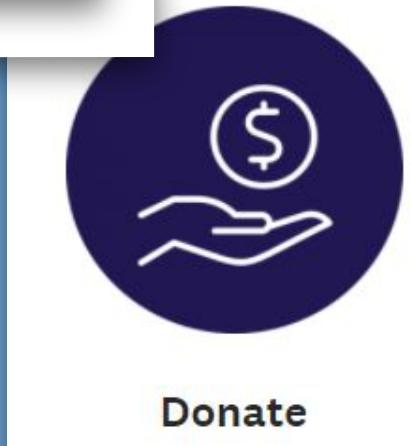
AUSTIN ANIML RESCUE









Topic and Reason

This project studies data from the [Austin Animal Center](http://www.austintexas.gov/content/austin-animal-center) in Austin, TX.

We chose this topic because we would like to help the Austin Animal Center better understand information on their animals so that as many animals as possible have a positive outcome.

Data Source Description

There are two datasets posted by the Animal Center as csv files:

Intakes (information on animals brought to the shelter) and outcomes (information on animals when they leave the shelter).

The information dates from 2013 to present and is updated daily on the Austin Animal Center data website. Variables in the dataset include an Animal ID, Animal Name, Animal Type, Breed, Color, Dates of intake and outcome, Sex, etc.

Links to the raw original datasets:

- [Austin Animal Center Intakes](https://data.austintexas.gov/Health-and-Community-Services/Austin-Animal-Center-Intakes/wter-evkm)

- [Austin Animal Center Outcomes](https://data.austintexas.gov/Health-and-Community-Services/Austin-Animal-Center-Outcomes/9t4d-g238)

We have two main questions that we are interested in answering, along with related subquestions.

Question 1 is a categorical prediction
Question 2 is a regression prediction.

- Question 1: Can we predict the outcome for an animal based on other characteristics?

- What are the possible outcomes that we should consider?
- What factors most influence the determination of the outcome?

- Question 2: Can we predict the length of stay at the shelter for animals?

- What factors most influence the length of stay?
- Are the factors that influence the length of stay different for different animals?

Preliminary Machine Learning Model

For predicting the animal outcome, our current sketch of our pipeline is to move from the SQL data into Python for cleaning, splitting into the training and testing sets, and then utilize a Random Forest Classifier.

Description of the data exploration phase of the project

	animal_type
Dog	53114
Cat	44724
Other	6894
Bird	612
Livestock	23

	outcome_type
Adoption	44919
Transfer	35175
Return to Owner	14527
Euthanasia	8401
Died	1195
Disposal	593
Rto-Adopt	461
Missing	54
Relocate	24

	intake_type
Stray	76661
Owner Surrender	17213
Public Assist	5687
Wildlife	5127
Abandoned	444
Euthanasia Request	235

The data exploration for the Austin Animal Rescue on this phase of the project it is focus in filter and select the intake and the outcome in Dogs , cats and birds.

Description of the analysis phase of the project

		outcome_subtype
outcome_type	outcome_subtype	
Adoption	Foster	9975
	Offsite	309
	Barn	3
Died	In Kennel	605
	In Foster	281
	At Vet	87
	Enroute	86
	In Surgery	24
Euthanasia	Rabies Risk	3845
	Suffering	3265
	Aggressive	403
	Medical	305
	At Vet	177
	Behavior	124
	Underage	36
	Court/Investigation	13
Missing	In Foster	21
	In Kennel	14
	Possible Theft	7
Return to Owner	Field	45
	Prc	9
	Customer S	7
Transfer	Partner	29595
	SCRP	2942
	Snr	2612
	Out State	14
	Barn	7
	Emer	5

The data show the outcomes type of the animals : Adoption, die, euthanasia, missing, return to the owner and transfer .

Technologies, languages, tools, and algorithms used throughout the project

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Result of analysis

Recommendation for future analysis

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Anything the team would have done differently

Communication Protocol

The roles will change during the final project so that each member has the opportunity to learn about each piece of the project and practice the related skills.

- **Role 1:** Repository management. This team member leads efforts to maintain the GitHub repository, including resolving merge conflicts, and help keep the main branch as the source of our most recent working code. This person also updates the Readme.md file on the main branch as changes are made to the GitHub repo.

- **Role 2 :** Project management. This team member leads the efforts for knowing what deliverables are required for the UT Bootcamp at each stage and assuring that the work the team is doing leads to successful fulfillment of the deliverables. This includes comparing the work to the rubric requirements as posted for class and helping to decide which technologies are used at each step of the project.

Communication Protocol

- **Role 3:** ML modeling. This team member works on the coding aspect of the ML model as well as data cleaning and exploratory data analysis.
- **Role 4:** Database & Dashboard management. This team member maintains and updates the database (PgAdmin 4) as needed and leads the efforts for creating and maintaining our final dashboard.
- **Role 5:** Presentation management. This team member writes the presentation files and helps other team members as needed.