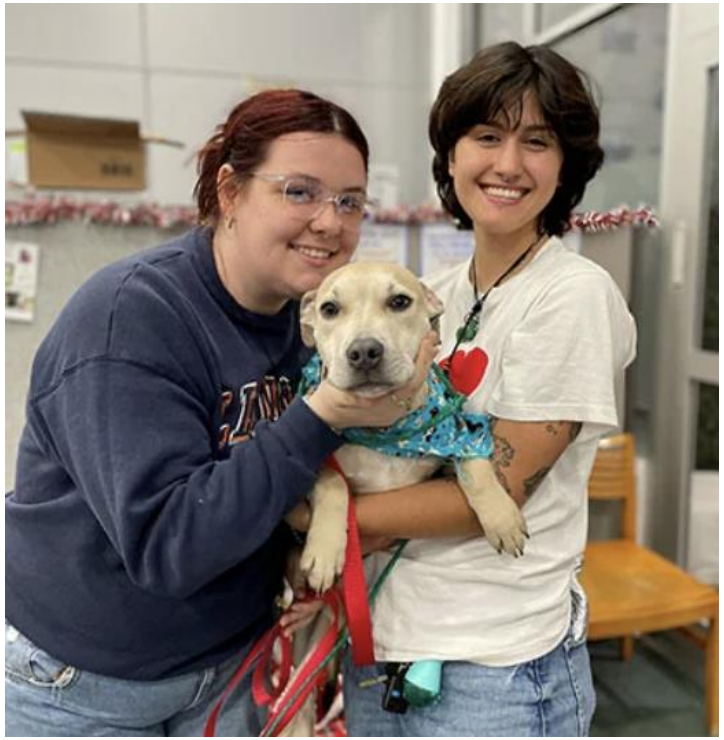
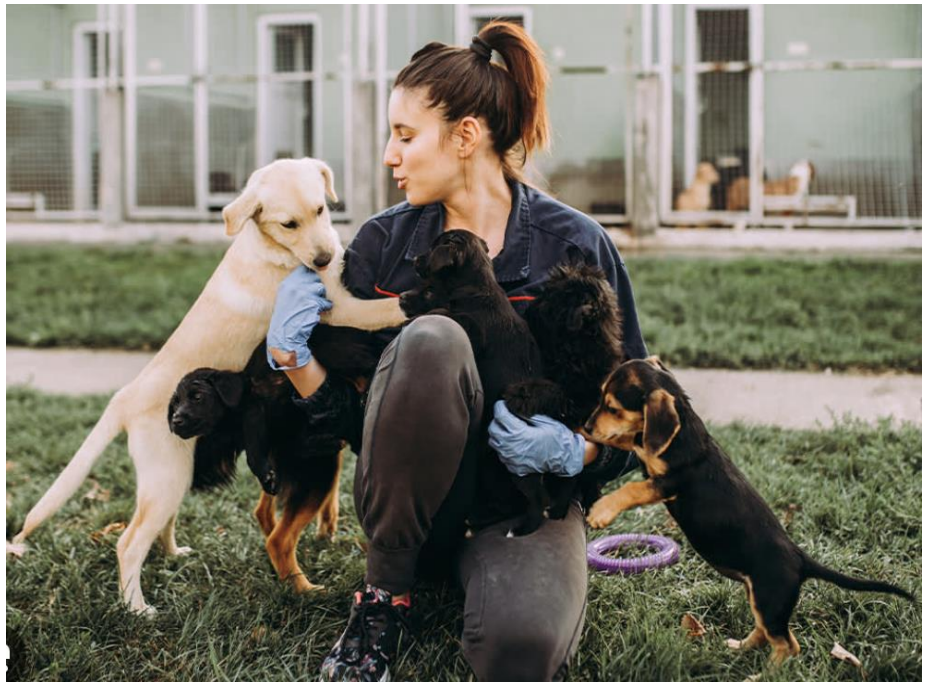
Utilizing Classification Algorithms for Dallas Animal Shelter Resource Allocation



DS PROS

Welcome to our presentation on leveraging classification algorithms for optimizing resource allocation at the Dallas Animal Shelter.

At DS Pros, we believe that data-driven approaches can significantly enhance animal welfare initiatives, leading to better outcomes for shelter animals and the community.



Animal shelters face numerous challenges, including limited resources and capacity constraints. Efficiently managing these resources while maximizing positive outcomes for animals is essential. By accurately predicting the outcomes of animals upon intake, shelters can better allocate resources such as staff time, medical care, and adoption efforts.

We propose a solution that utilizes classification algorithms to predict the outcomes of animals entering the Dallas Animal Shelter.

By analyzing the data on animal characteristics, intake circumstances, and previous outcomes, we can develop a predictive model that identifies the likely outcome for each animal.

This proactive approach enables the shelter to allocate resources more effectively, prioritize interventions, and improve overall animal welfare.

Instructions for Using the Classification Script

- **Make sure the following files are in the same directory:**

  `classify_animals.py`: Python script to classify animal outcomes.
  `input_samples.csv`: Sample input data file.
  `SVM.joblib`: Trained SVMClassifier model.
  `model_features_svm.pkl`: Features used in the model.
  `scaler_svm.pkl`: Scaler used for normalizing the data.

- **Fill in the information in the file "input_samples.csv" (sample data provided)**

- **Run the Classification Script:**

Open a terminal or command prompt.

Navigate to the directory containing the files.

Run the following command:

```
python classify_animals.py SVM.joblib input_samples.csv
```

This will classify the input data and create the SQLite database (outcome_predictions.db) with the predictions.

Table: outcome_predictions

	id	class
	Filter	Filter
1	1102	EUTHANIZED
2	1254	EUTHANIZED
3	2236	EUTHANIZED
4	2254	TREATMENT
5	3351	EUTHANIZED
6	3652	ADOPTION
7	4129	EUTHANIZED
8	4445	EUTHANIZED