CS 340 README Animal Shelter

## **Project Two: Animal Shelter**

This application provides users with access to a database of animals at the CS 340 Austin Animal Center (AAC), enabling them to search and filter the database. Users can apply filters to search for animals, particularly for the requester, Grazioso Salvare, to create a dashboard. Additionally, the project offers geolocation mapping, user interaction, and charts to help locate and utilize animals for search and rescue operations.

## **Motivation**

This program was designed to test my skills in working with databases and manipulating data. Python was chosen as the primary language for interfacing with MongoDB due to its simplicity, ease of manipulation, and compatibility with MongoDB. Furthermore, Python allows for quick compilation with its built-in compiler using Jupyter Notebook.

## **Getting Started**

To get started with this program:

1. Launch MongoDB and import the CSV file aac\_shelter\_outcome.csv.
2. Create both simple and complex indexes to parse the data stored in the document.
3. Authenticate by creating both an Admin account and an aacuser account to access the database.
4. Ensure Python is installed and run the program from a Jupyter Notebook.
5. Finally, enter the address of the dashboard and connect.

## **Installation**

* Ensure you have the latest version of Python and Jupyter Notebook to run both .py and .ipynb files.
* Install the following libraries to create functions in the dashboard: PyMongo, Dash, Plotly, Pandas, and Leaflet.
* Set up MongoDB to access the database.

## **Usage**

Use this section to demonstrate useful examples of how your project functions and can be utilized. Include examples of your code, tests, and screenshots for clarity.

### **Code Example**

Running Dash:  
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Working Radio buttons:

Table

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Changing options and switches Geolocation:  
Graphical user interface, application

Description automatically generated

**Errors:**

## I encountered an error when initially running the dashboard; it displayed raw data. To resolve this, I had to edit a print statement in my animalShelter CRUD Module to prevent it from attempting to print all of the returned animals.

## **Contact**

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