# Grazioso Salvare Animal Rescue Dashboard

## Project Overview

This project involves the development of a web application dashboard for Grazioso Salvare, an international rescue-animal training company. The dashboard allows users to interact with and visualize data from animal shelters, identifying and categorizing available dogs for search-and-rescue training.

### Required Functionality

The dashboard provides the following functionalities:

- Interactive options to filter the Austin Animal Center Outcomes data set.

- A dynamic data table that responds to filtering options.

- Geolocation chart and a pie chart that dynamically respond to filtering options.

- Inclusion of the Grazioso Salvare logo and a unique identifier.

A full screencast demonstrating the functionality of the dashboard can be viewed [here](https://youtu.be/mdpz0gMf83E).

### Tools and Rationale

- \*\*MongoDB\*\*: Used as the model component of the development. MongoDB's flexibility, scalability, and ability to handle structured and unstructured data make it a suitable choice for interfacing with Python.

- \*\*Dash Framework\*\*: Provides the view and controller structure for the web application. Dash enables the creation of analytical web applications with Python, without requiring JavaScript.

- \*\*Jupyter Notebook\*\*: Used for developing and testing the code.

- \*\*Apporto\*\*: Provided the virtual machine environment.

### Steps to Complete the Project

1. Review the specifications and requirements.

2. Create an unfiltered data table of shelter animals.

3. Develop queries to allow users to filter the database.

4. Build interactive options for activating filters.

5. Add widgets for dynamic presentations of retrieved data.

6. Test the dashboard and verify functionality with screen captures.

7. Document the project in this README file.

### Challenges and Solutions

(Include any challenges that were encountered and explain how those challenges were overcome. This section can be personalized based on your experience.)

### Resources and Software Applications

- [MongoDB](https://www.mongodb.com/)

- [Dash Documentation](https://dash.plotly.com/)

- [Jupyter Notebook](https://jupyter.org/)

- [Apporto Virtual Environment](https://www.apporto.com/)

## Conclusion

This project successfully delivers a user-friendly, intuitive dashboard that meets the requirements of Grazioso Salvare. The open-source code is designed to be adaptable for similar organizations, contributing to the broader community of animal rescue and training.