**Project 2-README**

Makayla L Meeks

CS 340: Client/Server Development

R.Perkins

June 27, 2025

**About the Project / Project Title**

This project is a web-based data dashboard created for Grazioso Salvare, a company specializing in rescuing and training dogs for search and rescue missions. The dashboard allows users to explore and filter animal shelter data using an interactive UI built with the Dash framework and powered by MongoDB. The tool enables the company to filter for dogs that meet specific training requirements based on breed, age, and sex.

**Motivation**

Grazioso Salvare needed a data-driven solution to streamline the process of identifying and selecting dogs that meet criteria for training in water rescue, mountain/wilderness rescue, and disaster rescue. This dashboard was developed to provide their team with an intuitive way to filter data, visualize breed distributions, and view animal locations using a map—all in real time.

**Getting Started**

To run the dashboard locally in Jupyter Notebook:

1. Open the `ProjectTwoDashboard.ipynb` file.
2. Make sure MongoDB is installed and running.
3. Ensure your custom CRUD module (e.g., `MeeksCreateandRead.py`) is in the same directory.
4. Run each cell in the notebook sequentially.

**Installation**

The following tools need to be installed for proper building and code functionality:

* Python 3.9+
* Jupyter Notebook or JupyterLab
* MongoDB (local or cloud instance)
* Python Libraries:
  + `pandas`
  + `dash`
  + `dash\_leaflet`
  + `dash\_table`
  + `plotly`
  + `pymongo`

**Usage**

The dashboard offers the following functionality:

* A dropdown menu to select dog training categories (WR, MWR, DRIT, RESET).
* An interactive table that filters records based on your selection.
* A pie chart that visualizes breed distribution in the filtered data.
* A map that plots the geographical location of selected dogs using coordinates from the dataset.

A screenshot of a computer

AI-generated content may be incorrect.A screenshot of a computer

AI-generated content may be incorrect.A screenshot of a computer

AI-generated content may be incorrect.A screenshot of a map

AI-generated content may be incorrect.A screenshot of a computer

AI-generated content may be incorrect.A screenshot of a map

AI-generated content may be incorrect.A screenshot of a computer

AI-generated content may be incorrect.A screenshot of a computer screen

AI-generated content may be incorrect.

**Contact**

Makayla Meeks