**Project Two README**

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CS-340-R4861 Client/Server Development

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**Project Description**

This dashboard provides an interactive interface for Grazioso Salvare to visualize and filter data from their Austin Animal Center Outcomes dataset. Utilizing MongoDB and Python’s Dash framework, the dashboard supports the following key functionalities:

* Interactive filtering, where user’s can filter animal records based on rescue type, (Water, Mountain/Wilderness, Disaster/Individual)
* Dynamic data table, where the data updates in response to filters, displaying relevant animal information
* Geolocation map, where the information on the table is displayed based upon the user’s selection on the data table
* Pie chart that visualizes the distribution of preferred breeds based on the selected filter

**Screenshots:**

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**Tools and Technologies**

* **MongoDB**,A flexible, document-oriented NoSQL databased well-suited for storing and querying the semi-structured animal data
* **Python** used for data manipulation, querying MongoDB, and creating dashboard logic.
* **Dash**, a python framework for building analytical web applications. Dash provides the structure, components and reactivity for the dashboard’s visualization and interactivity

**Rationale**

* **MongoDB** chosen for its scalability, ability to handle semi-structured data, and ease of integration with Python.
* **Dash**, selected for its focus on data visualization, its suite of interactive components, and its use of Python, allowing for seamless development workflow.