# CS 340 README Template

*Use this template to complete your README file. When completing the template, keep the headings as they are so that your document has a clear organization. Remove the italicized prompt text after you have completed each section for a polished final document.*

## Project 2

*This innovative application offers users the opportunity to explore a comprehensive database of animals housed at CS 340 Austin Animal Center (AAC). Users can employ advanced search and filtering capabilities to locate animals specifically requested by Grazioso Salvare. The primary objective of this project is to develop a dynamic dashboard that incorporates geolocation mapping, interactive user features, and graphical representations to effectively identify and mobilize animals for search and rescue operations.*

## Motivation

*This program was created to test my database skills and data manipulation abilities. Python was selected as the language to drive MongoDB due to its ease of use, manipulation capabilities, and compatibility with MongoDB. Additionally, Python can be quickly compiled using the built-in compiler in Jupyter Notebook..*

## Getting Started

*To get this program started you would first,  
1. Enter and Mongo and import the csv file aac\_shelter\_outvome.csv.*

*2. next one would want to create a simple and a complex index to parse the data stored within the document.*

*3. Now to authenticate a user would want to create both an Admin account and an aacuser account to access the database.*

*4. next a user would need to have access or install python and run the program out of a notebook.*

*5. Finally type in the address of the dash and connect.*

**Product Functionality**

*1. Interactive Filtering Options:*

*•Rescue Type Radio Buttons: Allows users to filter dogs based on rescue type,*

*including Water Rescue, Mountain or Wilderness Rescue, Disaster or Individual*

*Tracking, and a Reset option.*

*2. Data Table:*

*•Displays relevant information about the dogs, such as age, breed, and color.*

*•Supports single-row selection.*

*3. Graphs:*

*•Geolocation Chart: A map visualization with markers for selected dogs,*

*displaying their breed and name.*

*•Additional Graph: Another graph displaying relevant data*

## Installation

***MongoDB***  *-In consideration of its flexibility and scalability, MongoDB was chosen as the preferred database management system. Its seamless integration with Python facilitates efficient data storage and retrieval, making it a well-suited solution for our requirements.*

***Dash Framework****: Dash offers a user-friendly and intuitive framework for creating web applications using Python. This platform facilitates the development of interactive dashboards with remarkable ease.*

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## Usage

*Use this space to show useful examples of how your project works and how it can be used. Be sure to include examples of your code, tests, and screenshots.*

### Code Example

*A computer screen shot of a computer code

Description automatically generated*This is my Code for inserting the Company Logo and using the Radio Buttons

A screenshot of a computer code

Description automatically generated

This is the Code that I used to call back the Radio buttons making them interactive

A computer screen shot of a computer code

Description automatically generated

This is the code I used to create the Pie Chart.

### Tests

*I repeatedly ran the code in Jupyter for testing purposes until the dashboard displayed the correct results.*

### Screenshots

*A screenshot of a map

Description automatically generated*

*This shows the Logo title and the Water Rescue Radio filter*

*A screenshot of a map

Description automatically generated*

*This is showing all the dogs because I have it set to Reset*

*A screenshot of a map

Description automatically generated*

*This is showing all the Mountain/Wilderness rescue Dogs*

*A screenshot of a map

Description automatically generated*

*This is Showing all the Individual / Disaster Rescue Dogs*

***Challenges:***

*During the creation of this dashboard, I went through many challenges from the code and from Apporto dropping internet. The Biggest challenge that I ran into was the Radio Buttons not being interactive and having to thoroughly look over the code to figure out where it went wrong.*

## Roadmap/Features (Optional)

*Provide an open issues list of proposed features (and known issues). If you have ideas for releases in the future, it is a good idea to list them in the README. What makes your project stand out?  
  
Note: This section is optional for the purposes of this assignment. If you choose not to fill out this section, remove it from your final README file.*

## Contact

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