# 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.*

## About the Project/Project Title

This project is a dashboard for the AAC animal shelter located in Texas. The goal is to provide an easy way for their clients to search for the breed, age, and sex of animal that is best suited to their purpose. Most of the animal shelters’ best clients are first responders or search and rescue, because of this the focus for filtering animals was placed on the best breeds of dogs for those purposes. The dashboard features a table of available animals, a geo-location chart for the animals, and a pie chart that breaks down all the breeds available.

## Motivation

*This is a short description of the motivation behind the creation and maintenance of the project. This should explain* ***why*** *the project exists.*

The motivation for this project was to make it easier for clients to find an animal to adopt. Before the dashboard was created, there was no way for the staff to quickly update the animals they had available and there was no way for clients to easily search for animals online. This will provide a better experience for clients and make it easier for staff to update inventory. It should also increase traffic to the animal shelter and help get more animals adopted.

## Getting Started

## Installation

To get started you are going to need the MongoDB crud package, as well as dashboard jupyter booklet. Both files are preconfigured to run the dashboard, so once all the dependencies are installed you can just run the file and the dashboard will be available.

## 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

*Show what the library does as concisely as possible. Developers should be able to figure out how your project solves their problem by looking at the code example. Make sure that your code is short and concise.*

MongoDB crud package:

The MongoDB crud package contains four functions for interacting with the database, create, read, update, and delete. These four packages allow the animal shelter staff to maintain the database efficiently.

When creating an AnimalShelter object you need to pass in a username and a password. The rest of the connection settings are pre-configured.

A screen shot of a computer

Description automatically generated

To create entries in the database, pass in a Python dictionary to the create function. The function will return true if an entry was created and false if an entry was not created.

A screen shot of a computer code

Description automatically generated

To read an entries from the database, pass in a Python dictionary containing the criteria for the search. The function will return all entries matching the query results.

*A computer code with black text

Description automatically generated*

To update entries in the database, pass in 2 Python dictionaries. The first dictionary containing the search criteria for the entries to update and the second dictionary containing the information to update. The function will return the number of entries updated.

*A screen shot of a computer code

Description automatically generated*

To delete entries in the database pass in a Python dictionary containing the query for the entries you want to delete. The function will return the number of entries deleted.

*A computer screen shot of a computer code

Description automatically generated*

To use the dashboard, first set up an AnimalShelter object with the desired username and password. This retrieves all the data from the MongoDB database and removes the default id that is assigned by MongoDB.

*A computer code with text

Description automatically generated with medium confidence*

To edit the radio button filters, modify the dcc.RadioItems component with the new filters. You are also going to need to edit the callback function to fit the new items.

dcc.RadioItems:

*A screen shot of a computer code

Description automatically generated*

Callback Function:

*A screen shot of a computer

Description automatically generated*

If you want to edit any of the features of the table that is displayed, it can be done in this area.

*A screen shot of a computer code

Description automatically generated*

The pie chart and geo-location chart are just below this, if you want to edit them, this is their default configuration.

*A screen shot of a computer

Description automatically generated*

If you change the pie chart, you will also need to edit this callback function.

*A screenshot of a computer code

Description automatically generated*

If you change the geo-location chart, you will also need to update this callback function.

*A computer screen shot of a program

Description automatically generated*

If you would like to change the logo, edit the img source and the html.A tag shown below:



*A screen shot of a computer code

Description automatically generated*

You can also edit the content of the html.P tag to contain your own name.

### Tests

To test the CRUD functionality, you can write a simple python program like this to verify that the database is connected and all functions are working as expected.

A computer screen shot of a computer code

Description automatically generated

The output from this script should look like this:

A close-up of a computer code

Description automatically generated

To test the dashboard functionality, run the server in debug mode. Below are screenshots containing what the dashboard looks like with the different filtering options.

### Screenshots

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

## Contact

Your name: Hatcher Blair