# CS 340 README(Warrington)

## About the Project/Project Title

This project is geared toward finding shelter dogs that can be trained for various search and rescue jobs. With the different types of rescue jobs, there needed to be a way to search various shelters by breed, age, and sex of the dogs. It was found that certain breeds work better for search and rescue purposes.

## Motivation

Having the ability to search multiple animal shelters for possible rescue dogs will make it easier to choose likely candidates. Having more rescue dogs trained and, in the field, will help all emergency responders. This also has the added benefit of taking dogs out of shelters and giving them good homes and a renewed purpose in life.

## Usage

This project will let you use an interactive table to filter the dogs at the shelter. You will be able to choose between water, mountain, or disaster rescue and be able to reset the table. Once the results have compiled you will then be able to filter the results by breed, age, and sex. There will also be a pie chart showing the percentage available of the breeds and a map showing the location of the various dogs.

**Tools Used**

* MongDB - <https://docs.mongodb.com/manual/installation/>
* PyMongo - <https://pymongo.readthedocs.io/en/stable/installation.html>
* Dash - ­ <https://dash.plotly.com/installation>
* Jupyter Notebook - <https://jupyter.org/install>

Starting with MongoDB we were able to upload the information on all the animals at the various shelters in the area. That allowed us to create a database that we could search and filter the results. This is also the program that is used to create an users account that allows them to log into the program. We can use PyMongo library and Dash library to help us create tables, data frames, charts, and geolocation maps. Using the Python language and Jupyter Notebook we can test all of the functions to make sure they are working correctly.

**Challenges**

The first challenge was verifying that all the code was structured correctly. Such as using tab every time or using spaces every time. After verifying that the code was laid out correctly, I then had to take care of some syntax errors. Such as missing parenthesis or commas. Unfortunately, there are still some syntax errors that we are currently working through (as seen in the screenshot below) and are unable to show anymore of the project.

**Screenshots**

Graphical user interface, text, application, email

Description automatically generated

## Contact

Shanna Warrington