* **Describe the required functionality of the project. Include the screenshots or screencast taken while testing and deploying your dashboard (Step 6) as proof that you have achieved the required functionality.**

**The functionality of this project is to identify the number of rescue animals in the database. By fetch all the data in the document and displaying them in a readable data table that can have interactivity. Having a key function for the filter to identify desired dog breed for the suitable rescue mission.**

**![Graphical user interface, text, application

Description automatically generated]()**

**![Graphical user interface, text, application, email

Description automatically generated]()**

**![Graphical user interface, text, application, email

Description automatically generated]()**

**![Graphical user interface, application

Description automatically generated]()**

* **Describe the tools used to achieve this functionality and a rationale for why these tools were used.**
  + **Be sure to explain why MongoDB was used as the model component of the development, including what specific qualities or capabilities it provides for interfacing with Python.**

**While other technologies can offer the same out come the usability and implementation of data management makes it more easier wing mongodb. The obvious positive feature that mongo NoSQL has over SQL is querying the desired location. Having to select a table or a schema it is much more streamline with mongo and simpler high level then its counterpart “SQL”.**

* + **Be sure to explain the Dash framework that provides the view and controller structure for the web application.**

**In this project we are using python library called dash\_table a python pandas library. It is a very handy program that allows us to display data from the server and set up features for the interactive data to make it more usable. Programs written using dash gives a point and check interface to models written in python, as it is stated in the dash website. Using our data sets we can utilize the dash app to provide a more professional looking representation in a very simple way.**

* + **Be sure to include links to any resources or software applications that were accessed or used.**

*Dash overview*. Plotly. (n.d.). Retrieved February 19, 2023, from https://plotly.com/dash/

* **Explain the steps that were taken to complete the project.**

**Building off from the project form previous project, the first step I take is starting up my mongo server and using the required datasets in this case we are using the AAC data sets. In the project we have created our environment of the CRUD functionality from a previous assignment. Working with fetching the required datasets we use the fetch function in our AnimalShelter to findAll to manipulate the data. The next step after connecting out project to the CRUD functionality we set up out data frame. The data frame will provide all the data that exists in the database with a filter buttons to identify dog type and there rescue type. The filter buttons will filter of the special scope of dog breed if there are type of water rescue, mountain rescue, and disaster rescue. The library used to generate a clean data table is from the dash\_table. after our set up of the data table we then work on the functionality of the filtering aspect for different rescue type. In this case I have placed a conditional statement that will find the data of the sex\_upon\_outcome, and the breed of the dog. The last step was to set up the map and the pie chart. The map functionality was imported form the previous module assignments so implementing it to this project was already set up. Working with the pi chart we are using the package called plotly.express. the pie chart will be needing one value and that is names. Setting up are read function we can retrieve the required data and manage them with the pandas library along with the ploty\_express UI.**

* **Identify any challenges that were encountered and explain how those challenges were overcome.**

**The challenges I have had was working with filtering the specific dog breeds. Having the example in the course material was a great guide but implementing it to code was quite challenging. Reading over the mongo and pymongo documentation I was able to filter and display the required data for the data table.**