The artifact that I chose to refine for the database aspect was my final project from my CS340 Client/Server Development class that I took last semester. The goal of this project was to create an interactable dashboard application of an animal shelter database. The scenario was given that an international rescue-animal training company named Grazioso Salvare, looks for certain profiles in dogs to train. For example, search-and-rescue training is generally more effective for dogs that are no more than two years old. Additionally, different breeds of dogs are proficient at different types of rescues, such as water rescue, mountain, or wilderness rescue, locating humans after a disaster, or finding a specific human by tracking their scent. They were seeking an application that can work with existing data from animal shelters to identify and categorize dogs.

The code that exists for this project was broken into two sections, first was the code for the crud functionality within MongoDB database. The first step that was taken was importing all the existing data into a database within Mongo by using the import tool. Then an Admin and user account were created to ensure user authentication and collection. This was followed by the creation of a python script to enable CRUD functionality to the database. By using the python script accompanied with associated images allowed for the creation of the dashboard. I then implemented a dashboard filter option to retrieve queries for filter functionality. The dashboard can be manipulated to show a pie chart based off what was filtered.

I enhanced the code by cleaning up a lot of the mess that was associated with my code structure. As well as added clear comments and headers to each section of the code to indicate what is happening in each section. This project was a culmination of all three areas of python coding, using MongoDB as well as server development. Looking back at the project I remember having difficulty tying the python script to visualize in the jupyter program. Having individual interactable widgets as well as how they look I the UI was also a major factor. I really like how the overall dashboard looks and functions