This project was created to meet your need to identify dogs for training in search and rescue who are currently in shelters. The partnership you have created with the non-profit agency operating shelters in the area around Austin, Texas will provide their data to be gathered into the software project we have developed for you. This project is an excellent example of using resources wisely. I hope you will find the software makes your goal easier to reach.

MongoDB was used as the model component of the development because it is flexible, scalable and is easy to store all types of data. This allows you to obtain not just numbers, but it works with other applications and can store and recall videos, pictures, and sounds. It works well with Python which is a language that is also very user friendly and flexible. The purpose is to give you the greatest amount of flexibility when you want to see that these dogs have to offer.

The Dash framework provide the model, view, and controller structure for the web application. Which means that you can retrieve information from the database, manipulate it and update it, use it, or send it back to the database. This gives you information as quickly as possible as the people enter it. It has text boxes and dropdown menus to ease your interaction with the application.

This project was built first uploading the database into MongoDB and then building an application to reach into the database in MongoDB from JupyterNotebook using pymongo. The coding occurred in the Python language inside the JupyterNotebook. Dash framework was coded into the program to connect and make user friendly functionality.

.

The greatest challenge came from the frustration with the virtual environment. This created a time crunch on several assignments. It’s like driving to work this time of year in South Central Illinois and thinking you have an extra 15 minutes, but a combine is on the state highway for 20 of those extra 15 minutes going 10 miles an hour. That means at 5 pm on Sunday night I can finally see what isn’t working for the project. I have poured over the textbooks and gathered ideas from everywhere.

I used the Tutorials on Jupyter Notebook and Mongo in Apporto along with the discussion page.

MongoDB. (n.d.). : *The Developer Data Platform*. Retrieved October 16, 2022, from https://www.mongodb.com/

*Dash Framework*. (n.d.). Retrieved October 16, 2022, from https://www.tutorialspoint.com/python\_web\_development\_libraries/python\_web\_development\_libraries\_dash\_framework.htm