4-2 Milestone: Enhancement Two

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7/24/2022

CS-499

The artifact used for this algorithm is from the class CS-340 where we wrote code in python to interact with MongoDB. It goes through of database of animals ranging from cats, dogs, and birds. It works alongside emergency services to find certain dogs for certain jobs. It was created back in June 2021.

The reason for including this in my portfolio is because it shows my understanding of python and my ability to create complex search algorithms. It shows my ability to create scalable code, while also creating a complex algorithm, to pull from a database and work together to create a product. It shows that when I am approached with a problem/want, I am able to adapt that and turn it into something that runs and fits the customer’s needs. Code runs, it shows an image, with a data table, a pie chart, and a geolocational chart. The data table is coded to be fully searchable through types of animals, age of animals, gender of animals, and many more. There are also button the screen above the data table that when pressed, a backend algorithm is run to display specific search based on the button pressed. Then when another button is pressed, it will display a different search function of animals. Before I changed the algorithms, there were only four buttons. Three of the buttons searched for specific dogs who were needed for specific jobs for emergency services. The fourth button reset the search. This was a really neat feature and helped the animals find purpose, but it did not help people who were not looking for emergency service dogs. I expanded the algorithm and added in more options to search for due to their also being cats and dogs in the database. I added in three more buttons to include more animals for people to search for without having to search the data table. These buttons include the search for kittens (with an age range from 6 weeks to 1 year), search for cats (age from a year to older), and a search for all the birds at the shelter. They are not that specific due to people being able to search the data table, this just makes it less to search through. This is not a massive change, but a massive change was not needed. This just allowed more options for the user, and showed my ability to add to an algorithm.

In week one, I did not have a good plan moving forward with algorithm section, but I do believe that this a good addition. This means everything I have would be added to my outcome coverage plans. The outcome was expanding the complexity of an algorithm but allowing for more search options.

As I was improving my code, I actually saw some problems in my algorithm in general, and made some syntax changes to make things clear. The code still worked, but it had some unnecessary syntax that did not serve a purpose. It showed me that as I continue to learn and become better at coding, I see mistakes that I use to make. When making this code the first time, I was proud of it, and thought it was as good as it could be. When looking at it now, I am still proud of it, but it reminded me there is not really a ‘good as it could be’ when it comes to this. There are always things that can be added, and always changes that can be made to better a product or expand on a product. I also saw that the algorithm itself definitely has a weird usage, that I think could be confusing for some, and could be changed. That is due to me not thinking from a user’s standpoint when originally making an application. It has been a learning experience and the challenge was just trying to remember why I did some things. I did not want to remove or delete parts that did serve a purpose in some way, so I had to reread the whole code and track down variables and other things making sure they could be removed. It was actually pretty fun to look back, and helped me realize something I can easily do for the database section of the artifacts. I also removed unnecessary comments and added in some comments to make the code more readable along the way.