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CS 499 Milestone 4

Enhancement Three: Databases

This artifact is my final project from CS-340 Client Server Development, where I created a dashboard for an animal rescue “Grazioso Salvare” that displayed animal records and a corresponding graph of their rescue location. This data was pulled from an attached CSV file via CRUD (create, read, update, delete) routes set up in Mongo DB. This project was completed in the spring term of 2024 (May-June). I included this artifact in my portfolio as it demonstrates my ability to update the front end of this dashboard by adding a new button that let the user add an image of the pet and have that save to the database via a new update route and display the selected animals’ information in a new frame on the dashboard. This combination of enhancements showcased a functional upgrade to the backend database while allowing the end user to see a new front-end update via the pet details window. This project felt more applicable to a real-world application, and my enhancements aimed to mimic a more practical experience as to how someone would try and look up a pet using this site by wanting to see individual animal details in a clearer way.

This artifact enhancement helped me achieve the course outcome “Demonstrate an ability to use well-founded and innovative techniques, skills, and tools in computing practices for the purpose of implementing computer solutions that deliver value and accomplish industry-specific goals (software engineering/design/database)”. When deciding how to enhance this artifact, I took into consideration how I would want to use this application in a practical setting while adding to the complexity of the database. I originally wanted to just add a route for adding/editing/deleting an image to correspond to the selected pet’s detail. However, I felt that this dashboard could use additional user experience enhancements, so I added a new window to use a Get route to display the selected pet’s details in a new window next to the map module. This delivers value to the customer as they get more of a connection to each animal selected by being able to see all of the details and a picture instead of just a line in the table. This showed my ability to use an innovative technique of showing the animal details by using a new styling library with “dash bootstrap components” that helps align the project with more industry standard practices.

During the process of updating this artifact I feel as if I have put forward my most complete enhancement. This project is something I would most show off to a future employer as it showcases both my ability to build a creative front-end and the ability to connect it to a functional database that can run a variety of routes. Working inside Jupyter Notebook has given me challenges throughout my time at SNHU as debugging and troubleshooting is not as straightforward as developing local on my machine. During the course itself I had struggles with the MongoDB variables and that continued in this enhancement by forcing this new build to run on a different port to get around some of the constraints put forth by the instructor.