CS 499 Milestone Three

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The second artifact I chose for the enhancement was created during the CS 340: Advanced Programming Concepts course. The project aimed to develop a software application to identify and categorize available dogs for search-and-rescue missions from existing data.

I believe that being able to create interactive dashboards to manipulate data, gain insight, and customize visualizations is an essential skill for a data analyst, a career I want to pursue. Implementing algorithms for efficiently sorting and filtering the dataset based on user input showcases my understanding of algorithms. My interactive dashboard loads and updates data efficiently to ensure a smooth user experience, showcasing my understanding of optimized data retrieval to ensure responsiveness. By leveraging Dash’s callback functions, I demonstrated the ability to design efficient algorithms that handle the interactions and update the display in real-time.

The project was successfully moved from Apporto and Linux Shell to the local computer. I improved the dashboard by changing the radio buttons to a drop-down list, making the dashboard more visually pleasing. I was initially going to add additional options for filtering. Still, since the project aimed to select dogs based on their fit for specific missions, I didn’t see how additional searches, such as age, would make sense. Instead, I added the ability to toggle columns. My enhancement plan included hiding unnecessary columns to improve readability, which I did. But additionally, adding a toggle option allows users to customize the view to their needs.

I met the course outcome of demonstrating an ability to use well-founded and innovative techniques, skills, and tools in computing practices to implement computer solutions that deliver value and accomplish industry-specific goals.

During the enhancement, I learned that checking the code in small increments is essential to pinpoint any errors or issues. Testing the entire code only after it’s created makes it almost impossible to figure out what is wrong if it doesn't work.