**Besker Telisma**

**CS 499**

**5-2 Milestone Four Narrative**

This artifact was the project that I did for my 340 Database class, a dashboard that connects to MongoDB to extract information about different types of animals using the Dash library and Python. Additionally, it allows users to filter what kind of animals they would like to observe by rescue type: water, mountain, and disaster. It pinpoints their locations on a map view. I really wanted this artifact in my ePortfolio simply because of it expressing my ability in implementing practical software solutions that involve data handling, database management, and interactive data visualization.

I enhanced the performance of the artifact using techniques such as pagination, which enhances memory efficiency, and indexing within MongoDB for enhancing query performance. Therefore, this allowed me to satisfy my urge to apply well-founded techniques toward innovative and industry-relevant solutions. Herein, I learned the importance of striking a balance between performance and functionality, especially when large datasets have to be catered to. The key challenge during this was to maintain data retrieval efficiently to ensure that the dashboard remained responsive, which provided a number of lessons learned on how to optimize real-world software applications.