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Professor Goggin

CS-499

**Enhancement Two**

1. *Briefly describe the artifact. What is it? When was it created?*

Enhancement number Two was a proof of concepts paper written for the Data Structures and Algorithms class taken at Southern New Hampshire University. In this paper, we were asked to describe different types of structures and algorithms encountered in the class and which lab in the course best exemplified my understanding of these concepts. This artifact was originally created February of 2021.

1. *Justify the inclusion of the artifact(s) in your ePortfolio. Why did you select this item? What specific components of the artifact showcases your skills and abilities in data structures and algorithms?*

I believe that this artifact belongs in my portfolio because of how it showcases my ability to design and evaluate computing solutions that solve a given problem using algorithmic principles and computer science practices and standards appropriate to its solution, while managing the trade-offs involved in design choices anddesign, develop, and deliver professional-quality oral, written, and visual communications that are coherent, technically sound, and appropriately adapted to specific audiences and contexts. The artifact now showcases my skills in finding and using visualizations and specific metric comparisons that can be understood by many audiences. Now, the artifact compares and contrasts the options which were available to use and defends the option chosen, detailing why it fits the use case better than the others. This is an important skill I have harnessed in this enhancement, which is quite valuable when presenting to non-technical crowds. Although it still does contain some technical jargon relating to Big O Notation, the polished artifact uses quantifiable metrics to explain why each structure or algorithm exceeds the other available options. By adding in these enhancements, this proof of concepts paper is now a far superior rendition of the original paper submitted in the class.

1. *Reflect on the process of enhancing and/or modifying the artifact. What did you learn as you were creating it and improving it? What challenges did you face? How did you incorporate feedback as you made changes to the artifact? How was the artifact improved?*

The biggest challenges I faced during this enhancement were related to personal comprehension. I sought to not only learn more about why each was chosen but also why they were the best choice. This led to conducting hours of research into each topic within the paper to learn thoroughly. I really feel like this was a great process to partake in, because I retained so much new information than I had previously while taking the class. Because of classes I had taken later on, I was able to understand more about Big O Notation and what it meant for data structure and algorithm choice complexity-wise, both time and space. The ability to learn constantly is a needed skill of any programmer, which my learning process and adaption has shown in this enhancement. Now, I feel like this paper is a proper reflection that can be used as a proof of concept. This polished artifact exemplifies my understanding of how data structures and algorithms work together to keep programs running efficiently and using the least amount of space possible. Before the changes were made, this paper contained many poor justifications of decision. The polished artifact now properly displays and defends a strong grasp of these concepts and makes an excellent contribution to my portfolio.