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CS-499: Milestone Three – Algorithms and Data Structure

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

The artifact I used for this enhancement is a Python script called travel\_search.py. I created it during last week’s milestone, and it’s based on ideas from the SNHU Travel project we planned in CS 250. The script is a simple travel search tool where users can search for vacation spots by destination, budget, or even keywords like “beach” or “city.” It runs in the terminal and uses basic filtering logic to return matching trips from a list.

**2.) Justify the inclusion of the artifact in your ePortfolio. Why did you select this item? What specific components of the artifact showcase your skills and abilities in software development? How** **was the artifact** **improved?**

I picked this artifact for my ePortfolio because it shows my ability to apply algorithms and data structures in a real-world kind of program. In our original planning phase in CS 250, we talked about how helpful filters would be for users, and this enhancement actually brings that idea to life. It shows I can work with Python dictionaries and lists, and use conditions and loops to write useful filtering logic. I also added more advanced filtering where users can combine destination and budget searches, which made it more functional than just simple lookups. Plus, the new keyword search gives it a more realistic feel and shows I can expand logic without overcomplicating things.

**3.) Did you meet the course outcomes you planned to meet with this enhancement in Module One? Do you have any updates to your** **outcome-coverage plans?**

The course outcome I planned to hit was around solving problems with algorithmic principles and using data structures the right way. I think this script shows that. The way I loop through the travel data and check conditions is straightforward, but effective. Adding the list of keywords to each trip entry made the data more flexible and helped support the new search feature. The filters run fast and return only what’s relevant to the user input.

**4.) Reflect on the process of enhancing and modifying the artifact. What did you learn as you** **were creating it and** **improving it? What challenges did you face?**

While working on the script, I learned how important it is to think through how your data is set up before writing the logic. At first, I had to go back and change the structure to add keywords, and that made the filtering code way cleaner. One challenge I had was making sure that each search option worked by itself, but also that the multi-criteria search didn’t break things when combining filters. It took some trial and error, but once I figured out the logic, it felt pretty good to see it working right.