

Task 1: AI-Powered Code Completion – Summary

In this task, I explored how **GitHub Copilot**, an AI code completion tool, can assist in software development. I used Copilot to generate a Python function that sorts a list of dictionaries by a specific key, a common task in data processing. The tool quickly suggested a correct and efficient solution using the `.sort()` method with a lambda function, which sorted the list in-place.

To evaluate the AI's performance, I manually implemented the same function using Python's built-in `sorted()` method. While both approaches produced the correct output, there was a key difference: the Copilot version modified the original list, while the manual version returned a new sorted list, preserving the original.

This comparison showed that **Copilot reduces development time** by generating syntactically correct code within seconds, especially for routine tasks. However, it also highlighted the importance of understanding what the AI suggests, as small implementation details (like in-place vs. copied sorting) can impact the outcome.

Overall, GitHub Copilot proved to be a valuable assistant that speeds up development, but it should be used with caution and developer oversight to ensure code correctness, performance, and alignment with project needs.