Task 1: AI-Powered Code Completion

Which version is more efficient and why.

The AI version is better because it's faster, cleaner, and easier to maintain. Manual code helps with learning, but AI tools like Copilot can save time and reduce bugs. For smart software solutions, using high-level, reliable tools is the way to go.

Performance and Efficiency

- Uses Python's built-in sorted(), which is highly optimized under the hood (based on Timsort).
- Performs at **O(n log n)** time complexity—way faster than a manual **O(n^2)** loop for larger data sets.

Clean and Readable Code

- One-liner function: simple, elegant, and easy to understand.
- Ideal for collaborative projects where clean code matters.

Safe Handling of Missing Keys

- Uses .get(key, None) to avoid crashes if a dictionary doesn't have the key.
- Prevents unexpected errors during execution.

Non-Destructive Sorting

- Returns a **new sorted list** instead of changing the original—this helps avoid side effects.
- Useful when you want to keep the original data unchanged for other operations.

Leverages AI's Pattern Recognition

- AI tools often recommend best practices based on patterns in high-quality code.
- Saves time and reduces chances of bugs with reliable suggestions.