

Reflection

Working on Assignment 1 and reviewing the provided solutions for Assignment 2 has been a constructive

learning process, combining problem-solving and peer review skills.

For Assignment 1, I tackled the task of finding all paths from the root to the leaves of a binary tree using Depth-First Search (DFS). This recursive approach was chosen because it closely mirrors the tree

structure and effectively handles path construction and backtracking. The key challenge was implementing

a solution that correctly stores and backtracks paths without affecting subsequent computations.

Understanding recursion's nuances, such as when to append or pop elements from the path, was crucial to

ensuring correctness. Testing with multiple examples confirmed that the implementation covered edge cases

like unbalanced trees or nodes without children.

During the review process for Assignment 2, I focused on evaluating both the problem statement and the

solutions. Reviewing another's code encouraged me to think critically about design choices, clarity, and efficiency. Breaking down the time and space complexity into layman's terms was particularly insightful,

as it required a deep understanding to simplify these concepts without losing technical accuracy.

Additionally,

I explored alternative solutions, such as Breadth-First Search (BFS), which provided opportunities to

compare

different algorithms for tree traversal.

This process improved my skills in both implementation and constructive feedback, emphasizing clarity, precision, and adaptability when addressing problems collaboratively.