

# COMPARATIVE ANALYSIS NUMERICAL INDEXING

## USING B TREES VS B+TREES

Metric	B-Tree	B+Tree
Insertion Time	Average: $O(\log n)$	Average: $O(\log n)$
Search Time	Average: $O(\log n)$	Average: $O(\log n)$
Space Efficiency	Less efficient (data stored in all nodes)	More efficient (data only in leaf nodes)
Query Performance (Equality Search)	Excellent	Excellent
Query Performance (Range Search)	Excellent	Excellent
Query Performance (Fuzzy Search)	Requires additional logic, might impact performance	Can be optimized with techniques like Hilbert curves