

Geometric Range Search

Range Tree: Performance

- Query Time

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Query Time

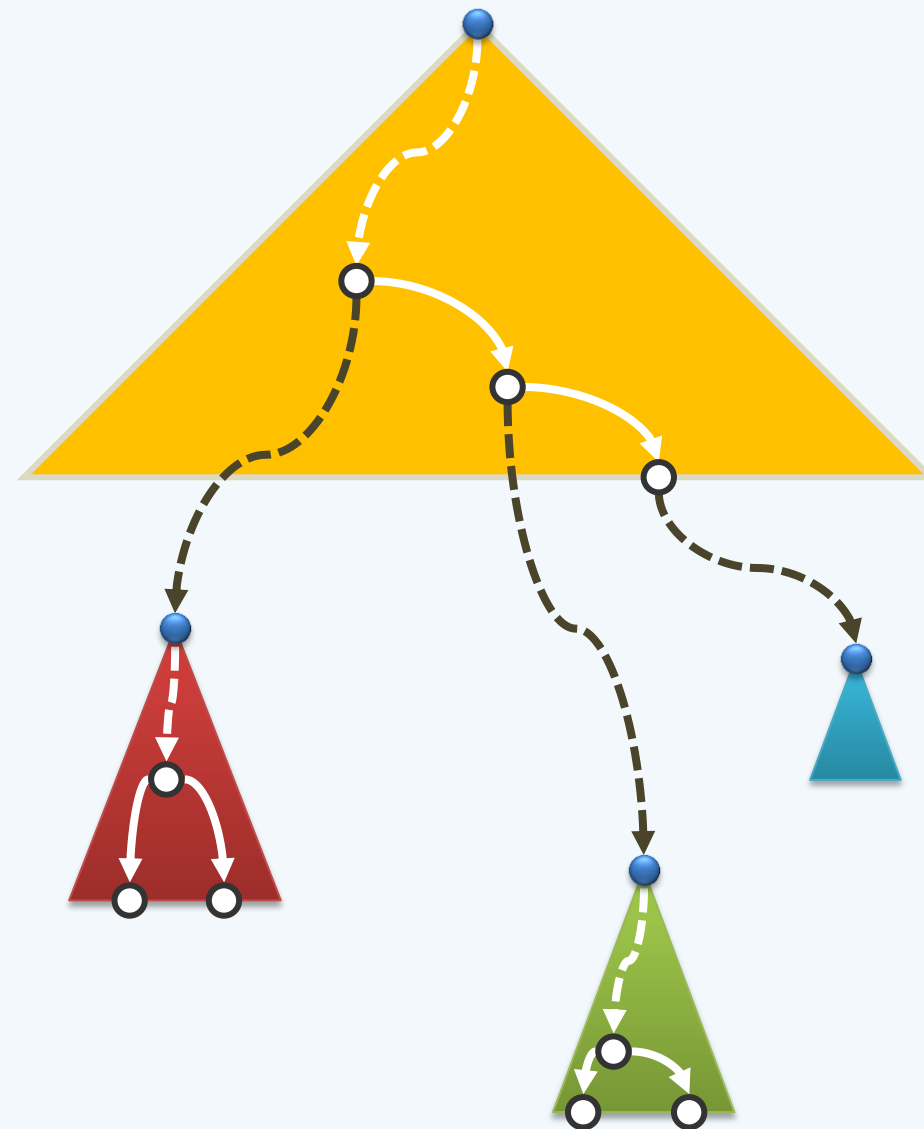
👁 Claim:

A 2-level search tree

for n points in the plane

answers each planar range query

in $O(r + \log^2 n)$ time



Query Time

- ❖ The x -range query needs $O(\log n)$ time to locate the $O(\log n)$ nodes representing the canonical subsets
- ❖ Then for each of these nodes, a y -range search is invoked, which needs $O(\log n)$ time

