

Finding the neighbours ($k = 1$):

- Find region containing \mathbf{x} (starting from root node, move to child node based on node test).
- Save region point $\mathbf{x}^* = \mathbf{x}_0$ as current best.
- Move up tree and recursively search regions intersecting hypersphere
- Update \mathbf{x}^* if new nearest neighbour has been found

For $k > 1$:

- Same algorithm, but save \mathbf{x}^* as k -nearest neighbour.
- **Complexity:** $O(k \log N)$

