
Algorithm 3 Query: c-approx k-nearest neighbor

Require: $\hat{x} \in \mathbb{R}^n$, $\mathbb{G}, \mathbb{H}, U(), D$

$L = []$

for all $g_j(x) \in \mathbb{G}$ **do**

$L \leftarrow U(g_j(\hat{x}))$

end for

$K = []$

for all $l \in L$ **do**

$d \leftarrow \text{dist}(\hat{x}, D[l])$

$K \leftarrow \{d, D[l]\}$

end for

$\text{sort}(K)$

return $K[0 : k]$
