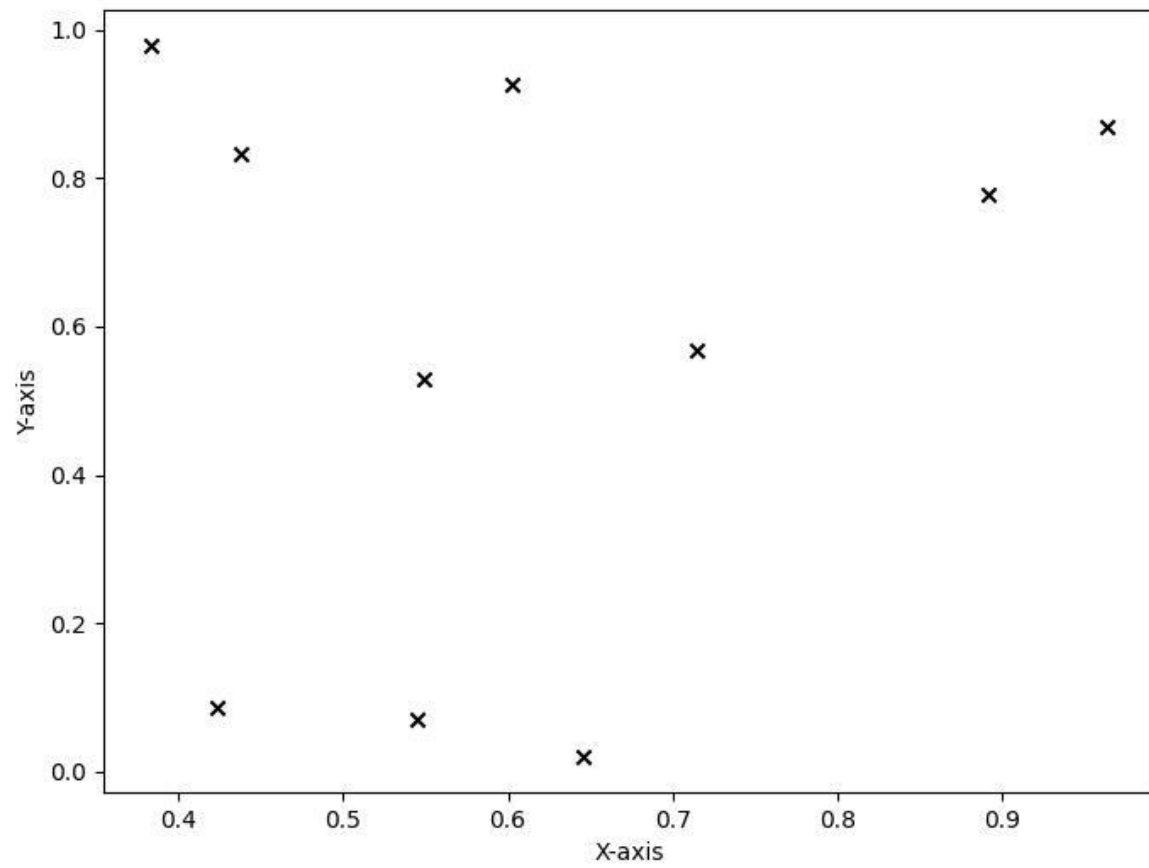


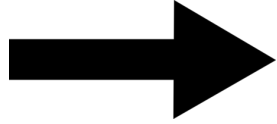
ANNOY

Approximate Nearest Neighbours Oh Yeah

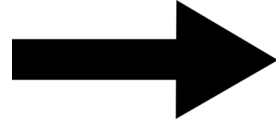
Background

What is (K-) Nearest Neighbor?

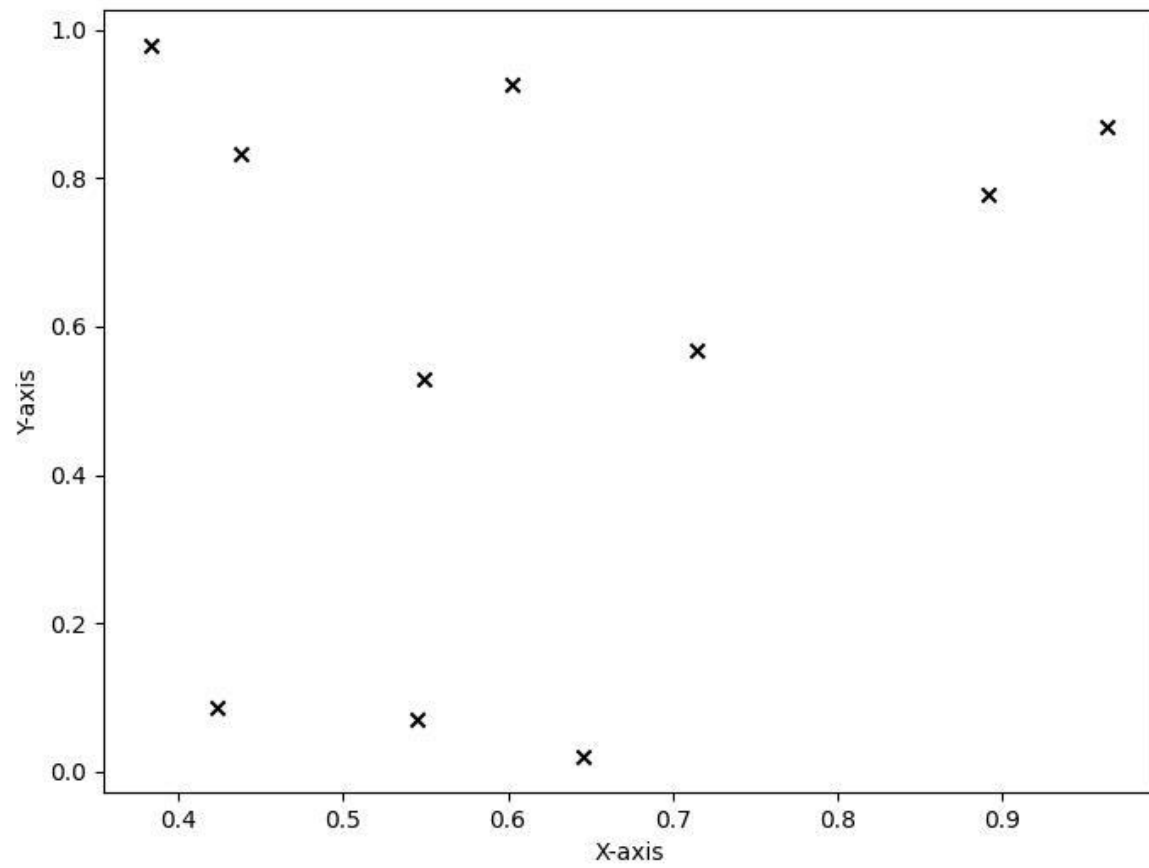


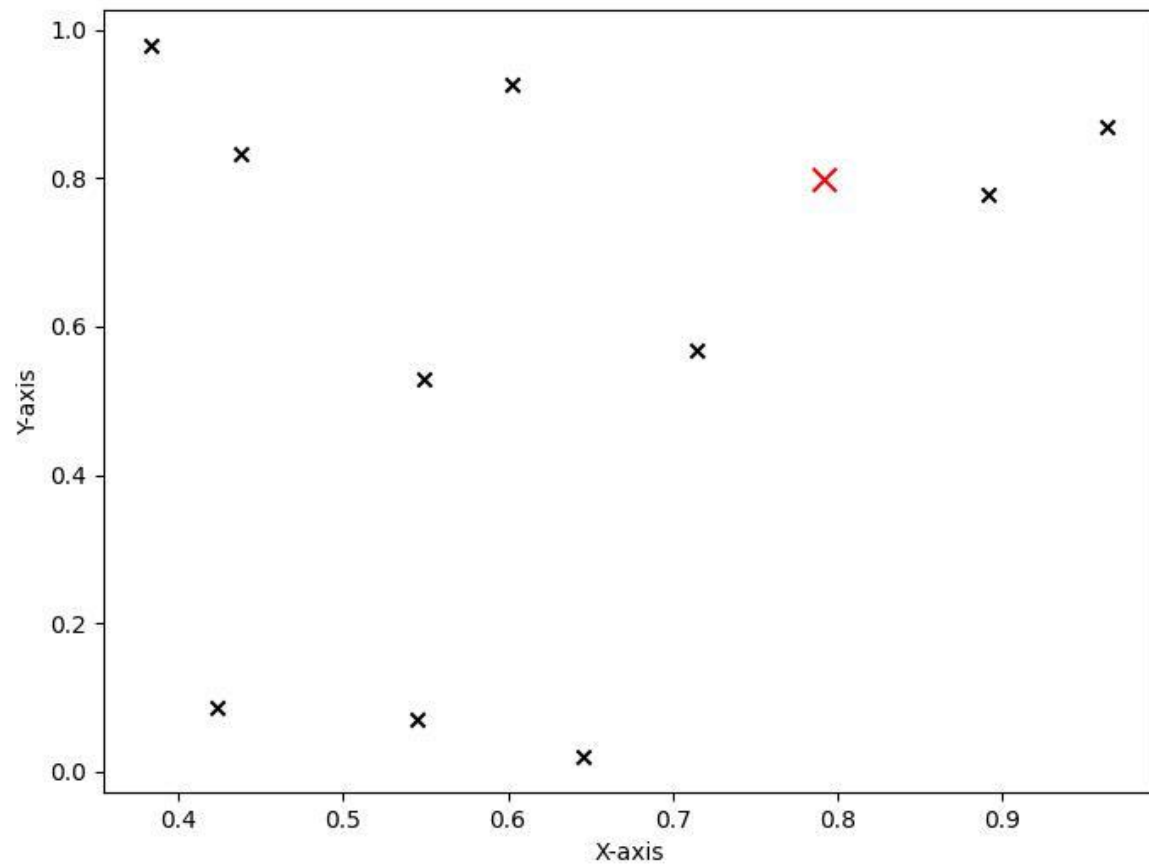


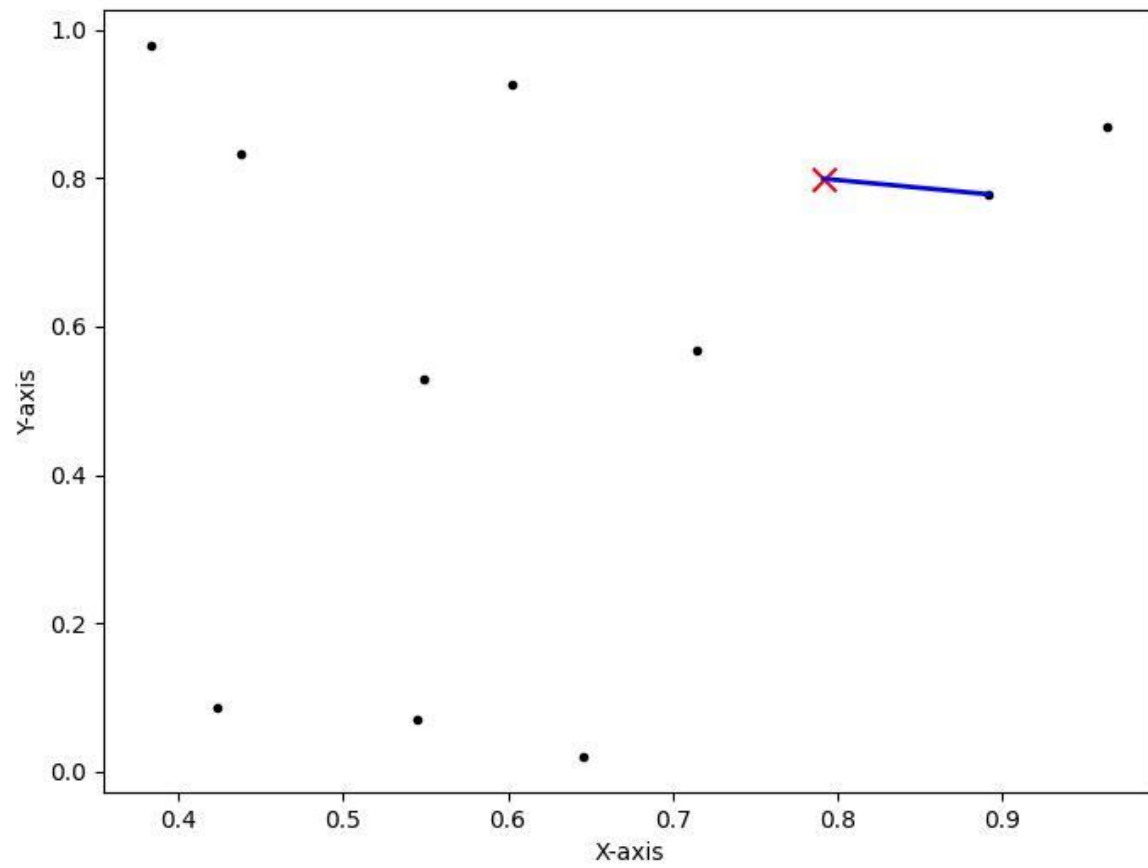

 $F(x)$

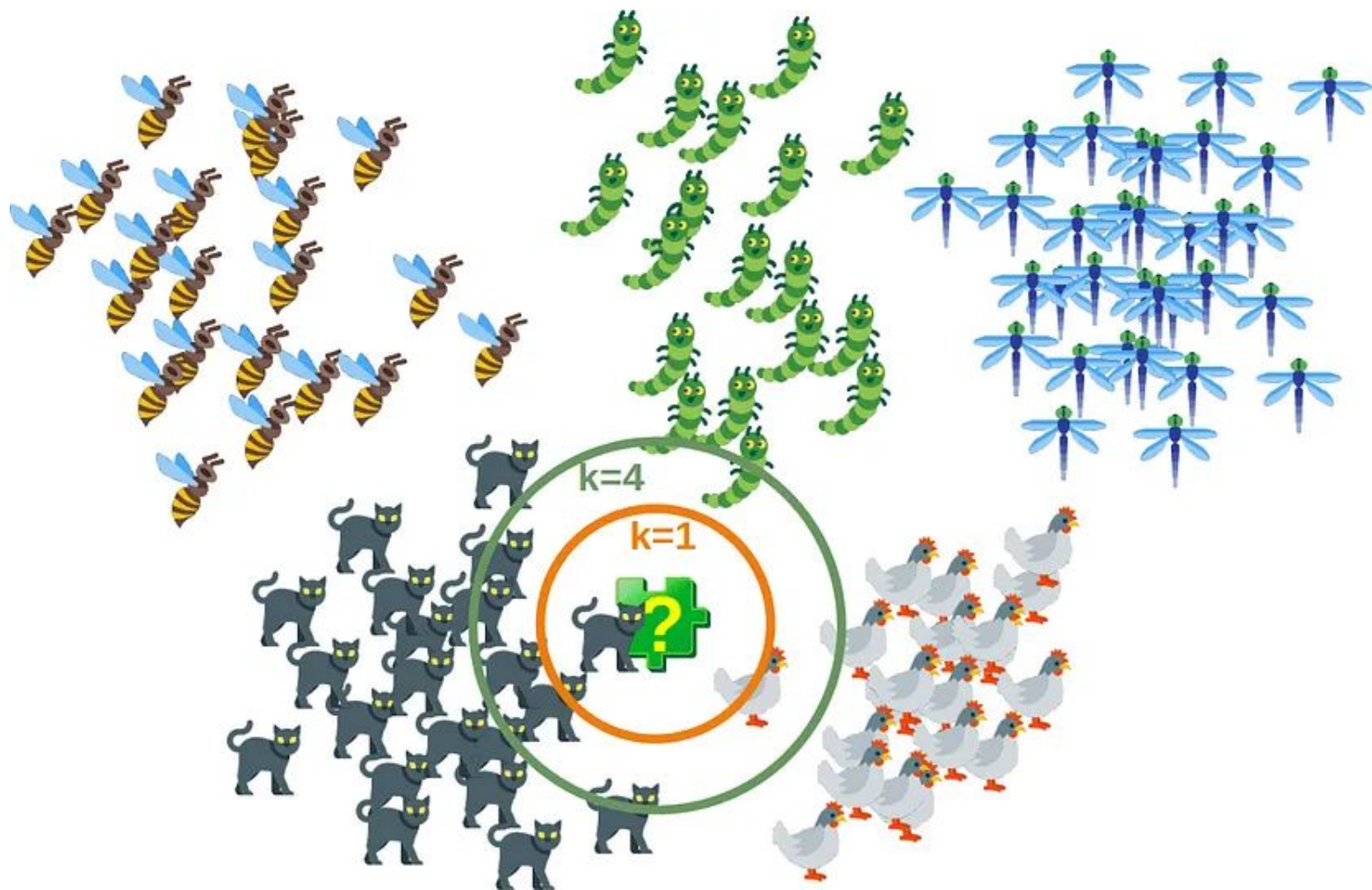


(x,y)

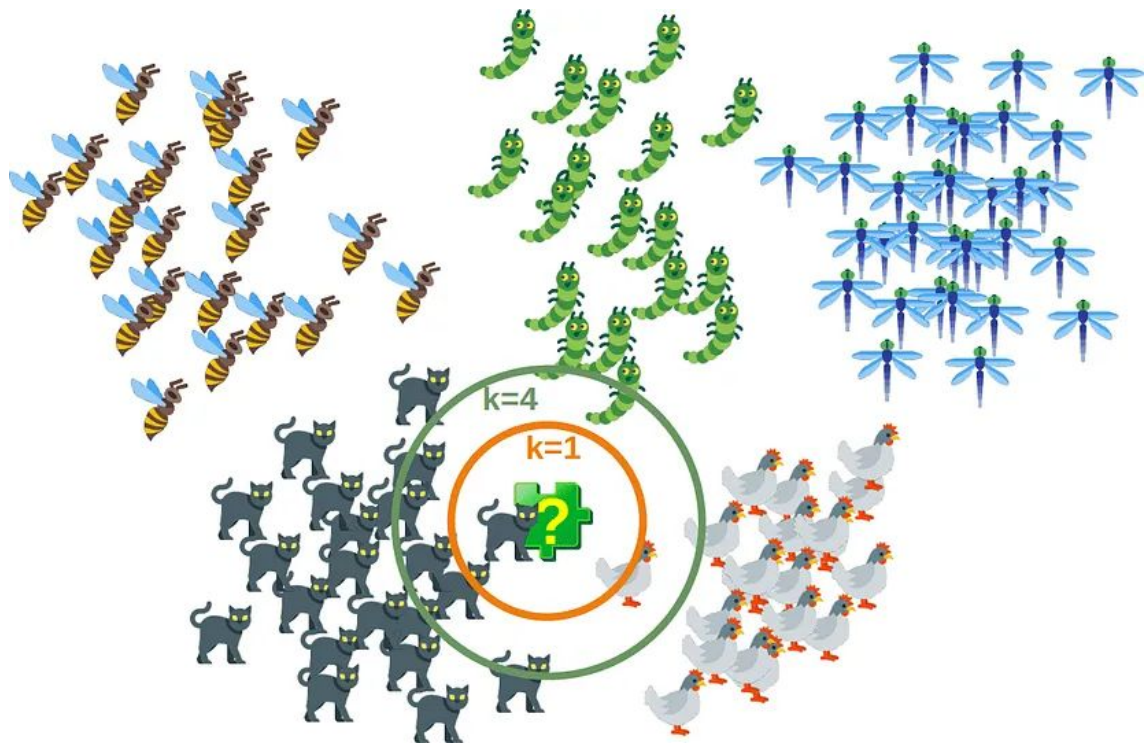








Is it good?



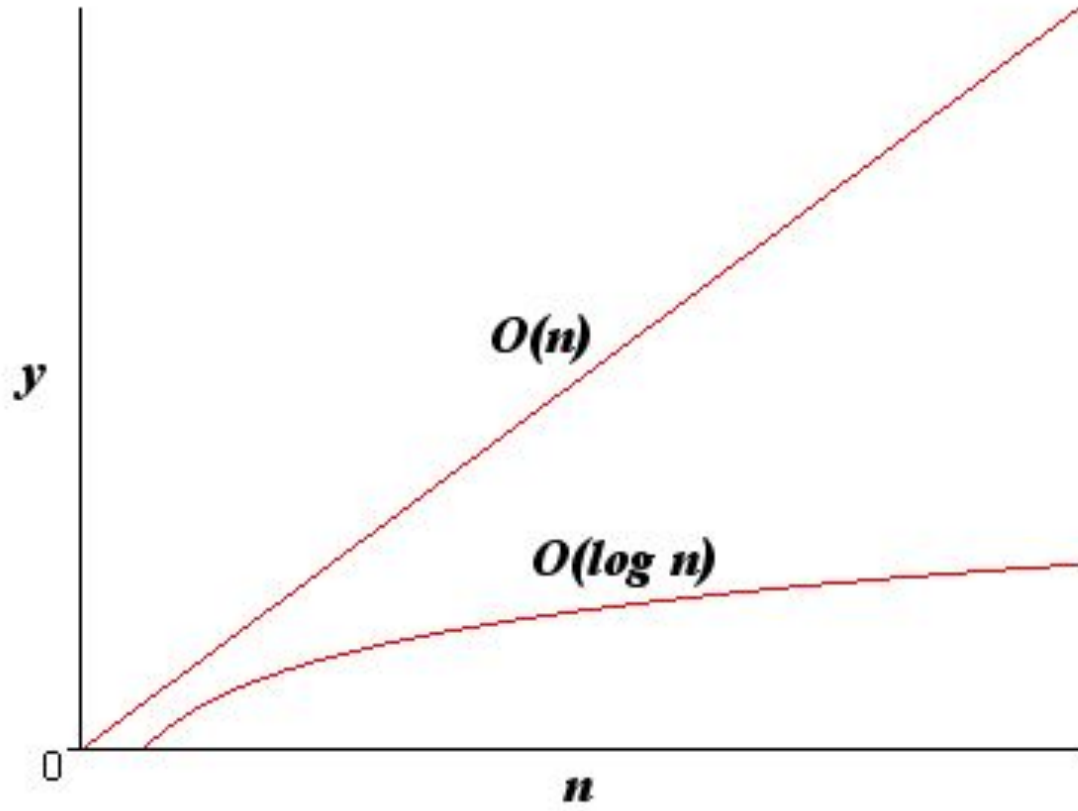
Easy 👍

Accurate 👍

Fast?

$O(n)$





~~$O(n)$~~

$O(\log(n))$

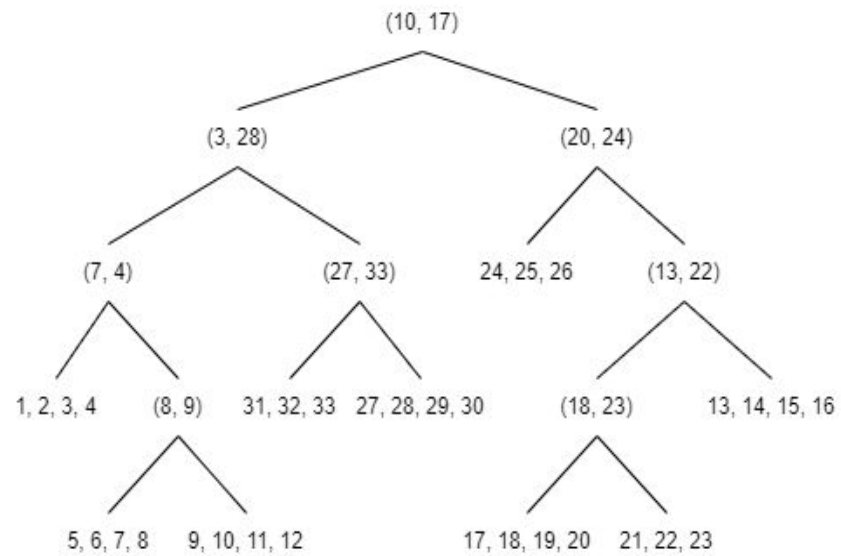
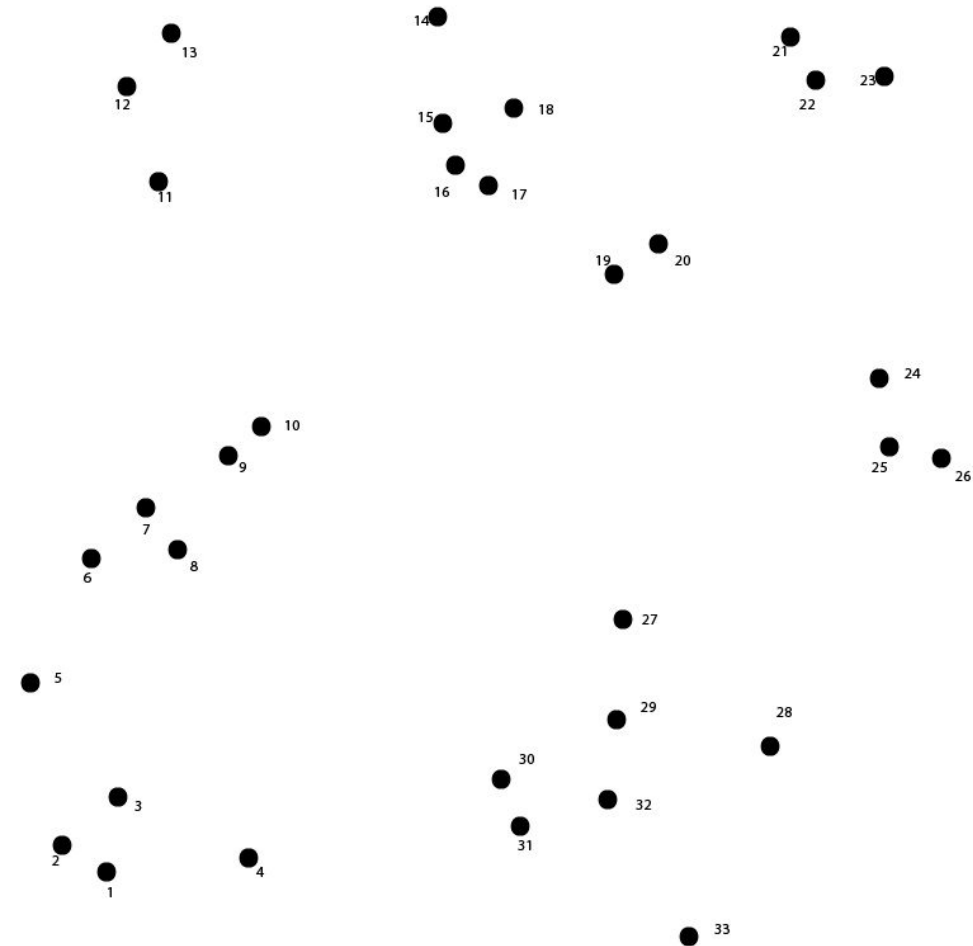
Approximate Nearest Neighbours **Oh Yeah**

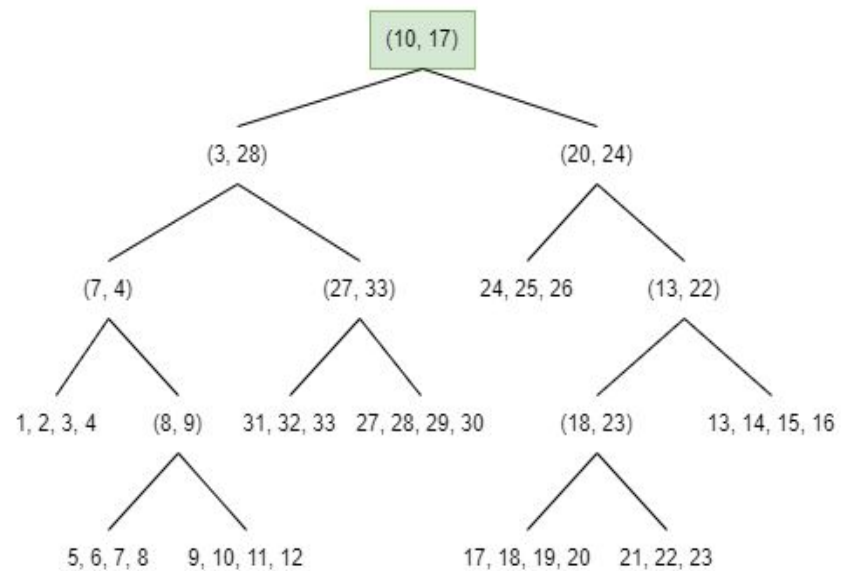
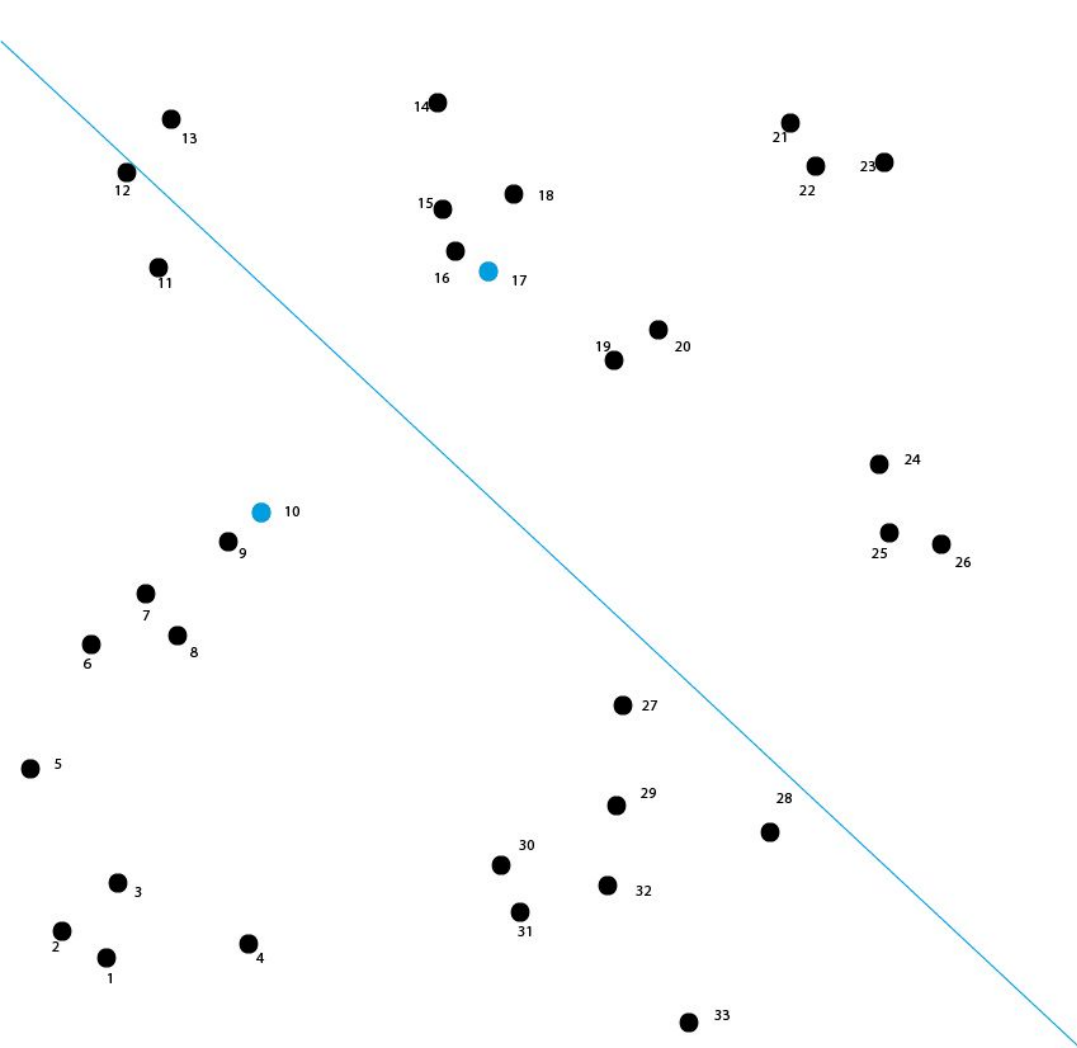
Song recommendation

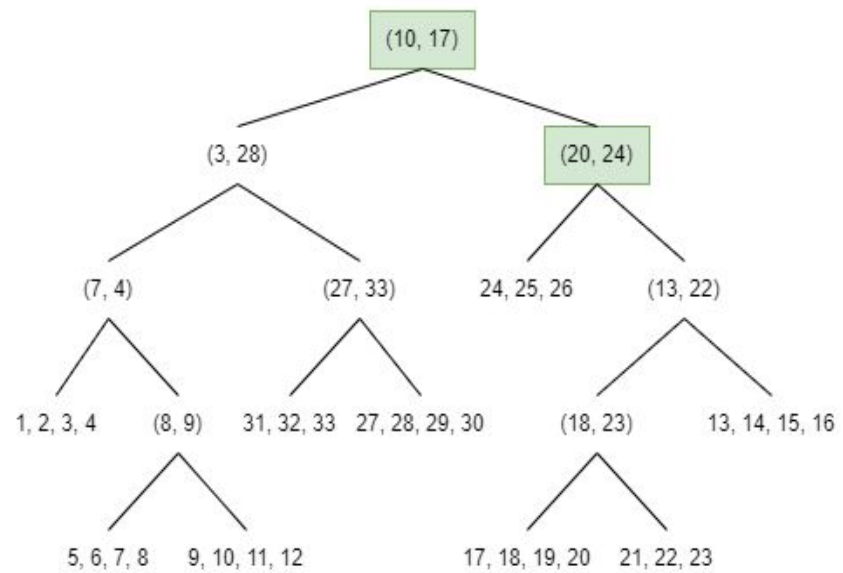
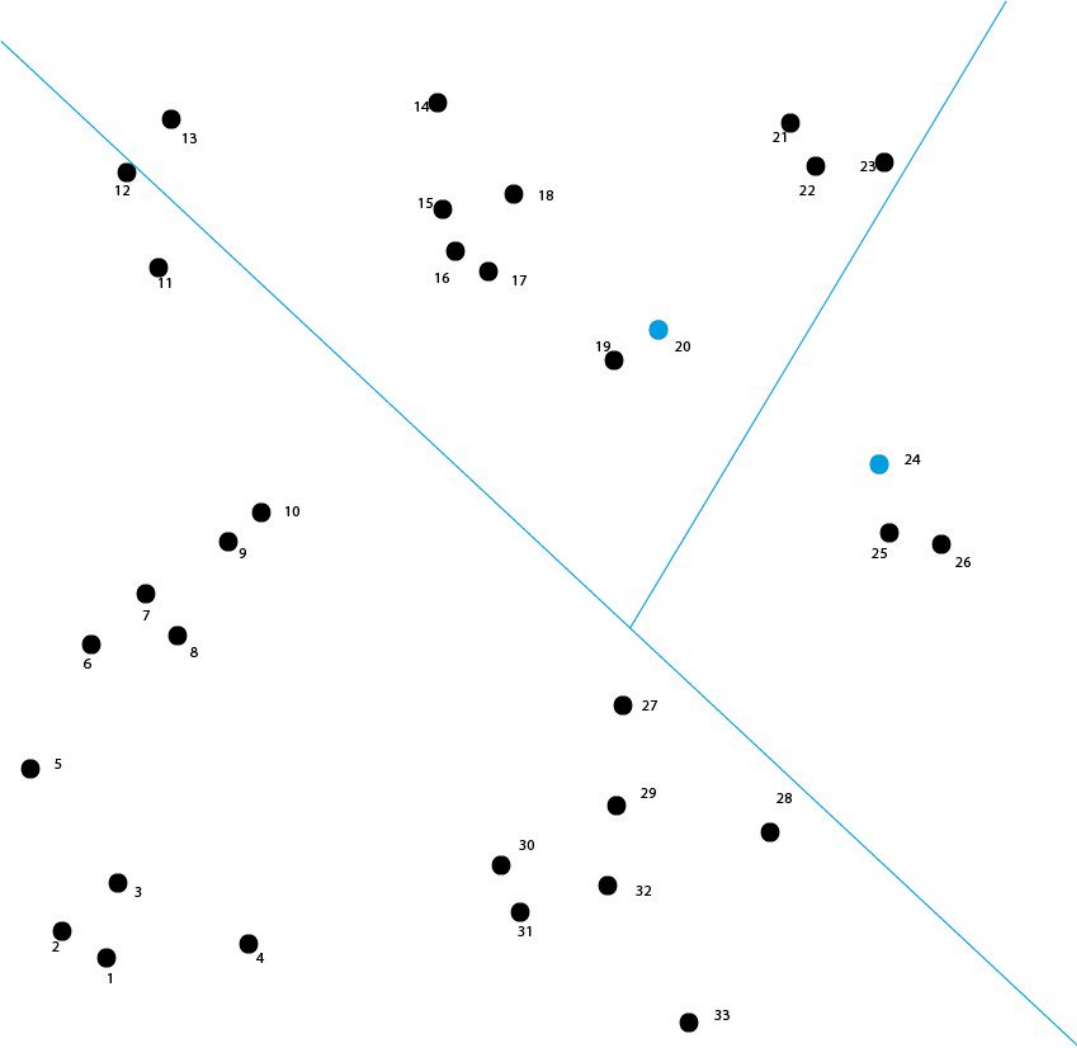
Millions of songs and users

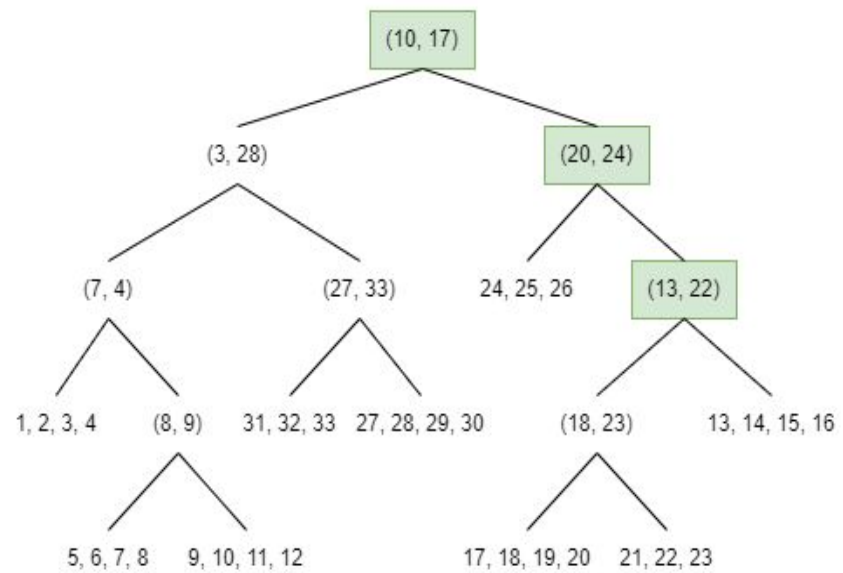
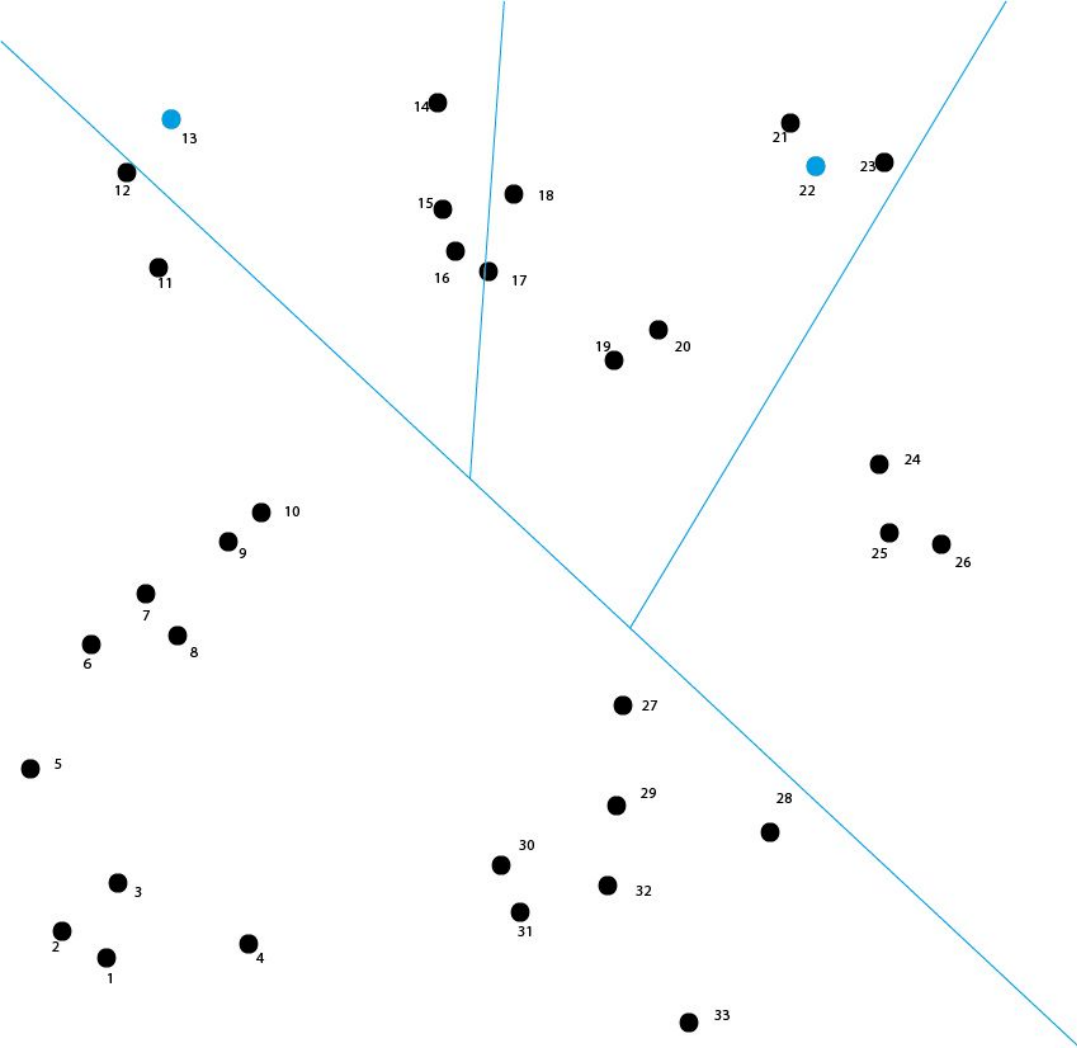
When closest neighbour does not matter

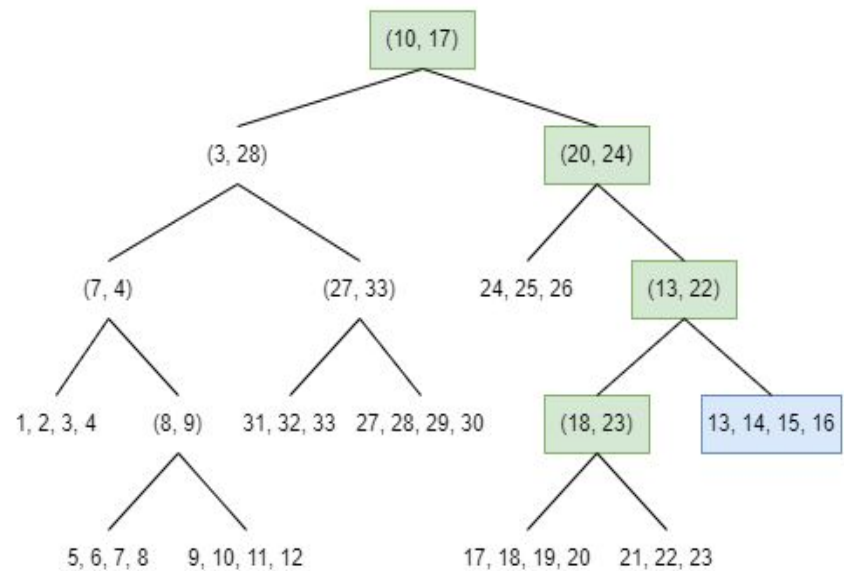
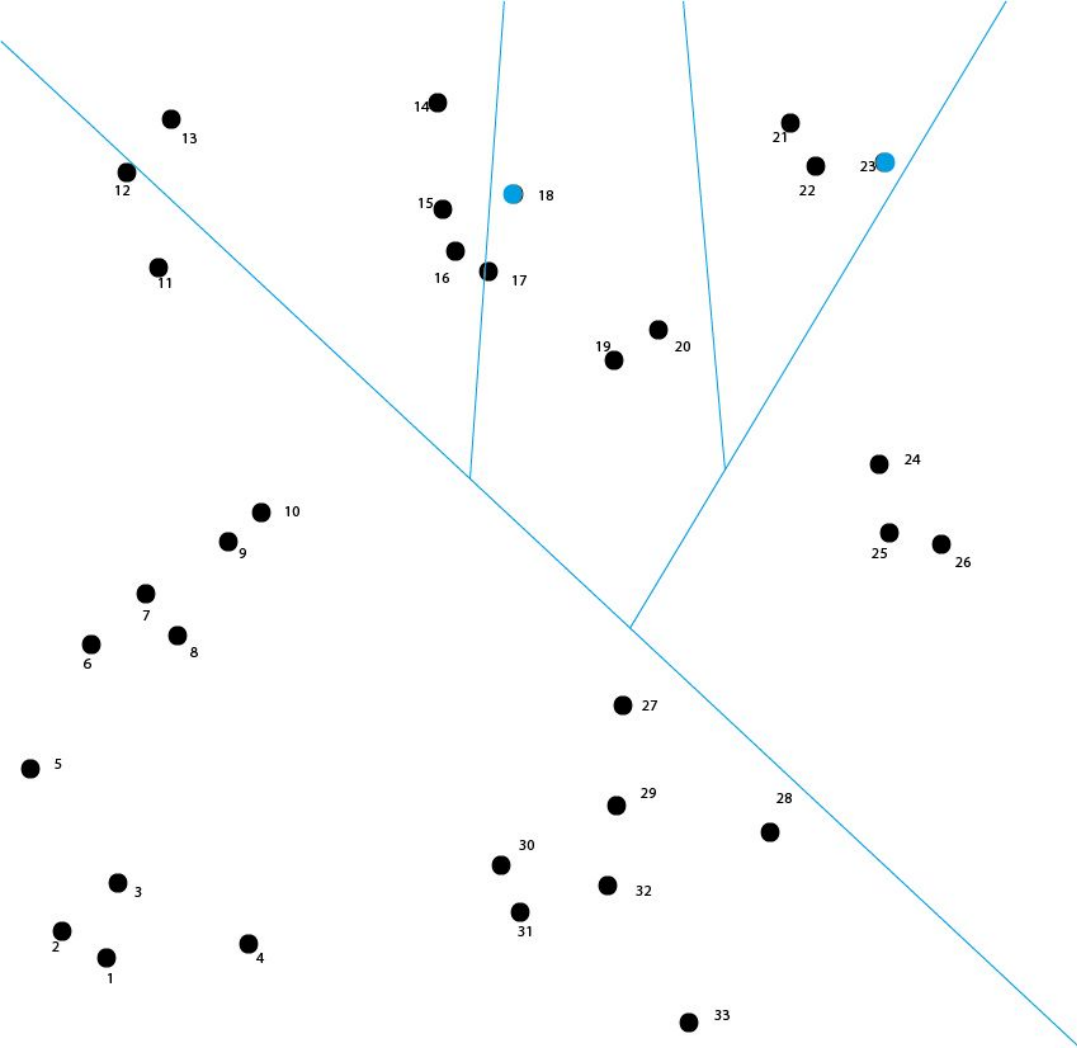


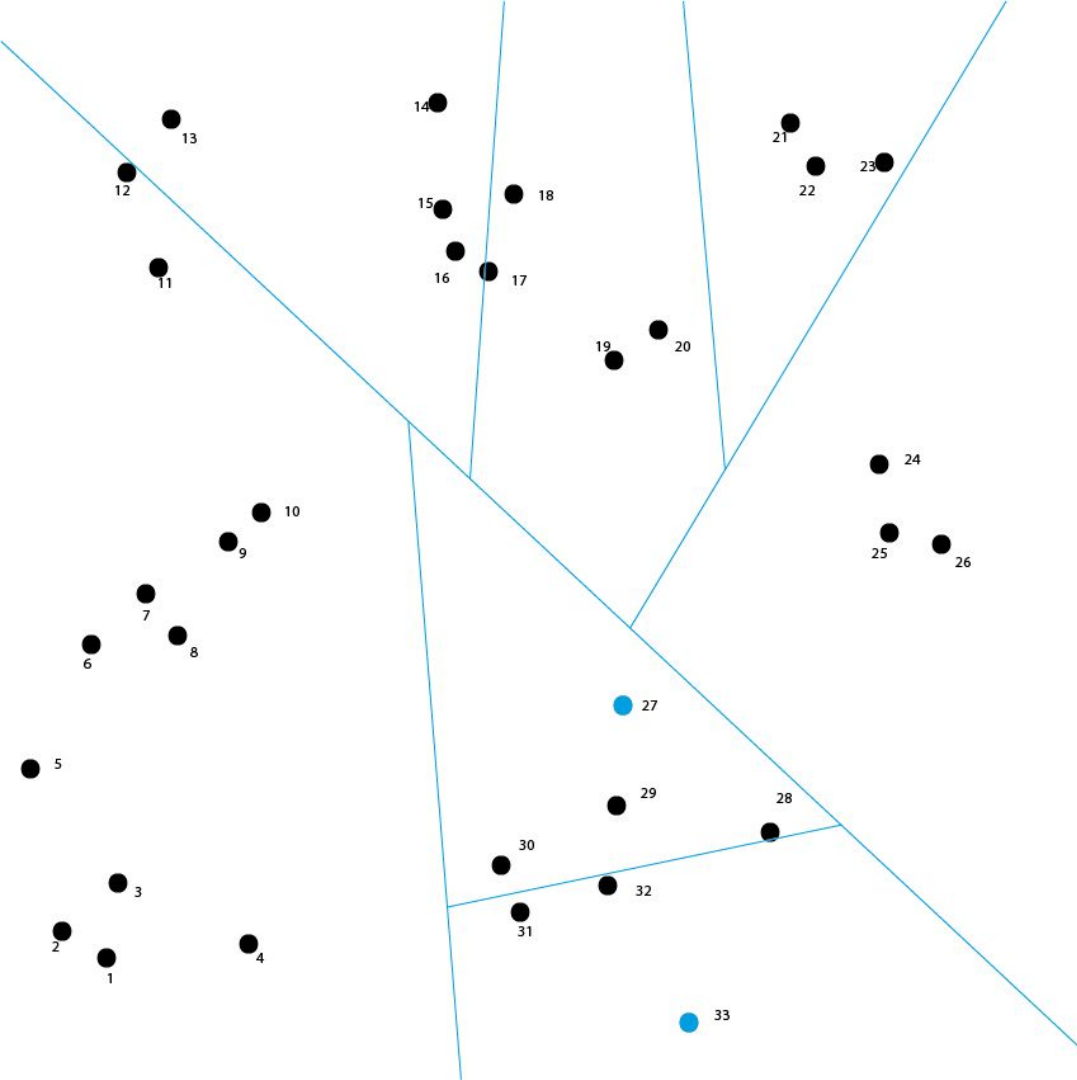


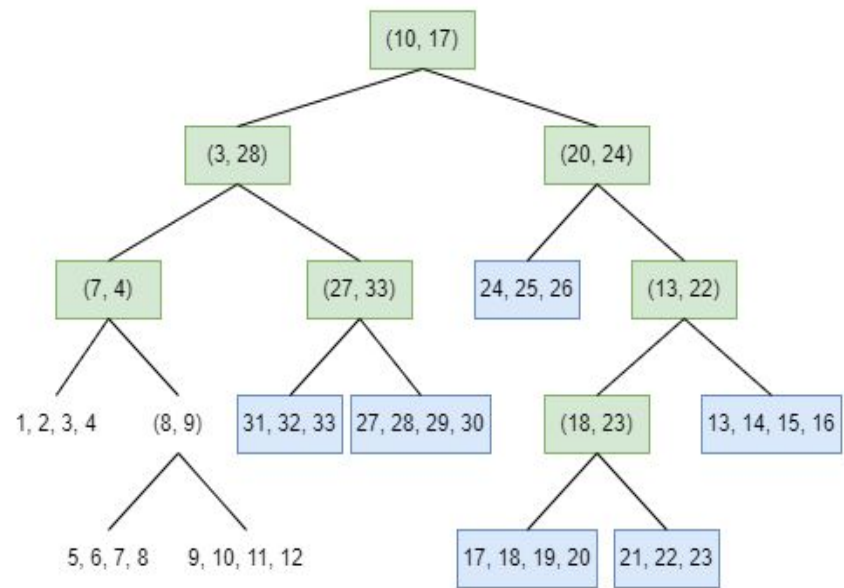
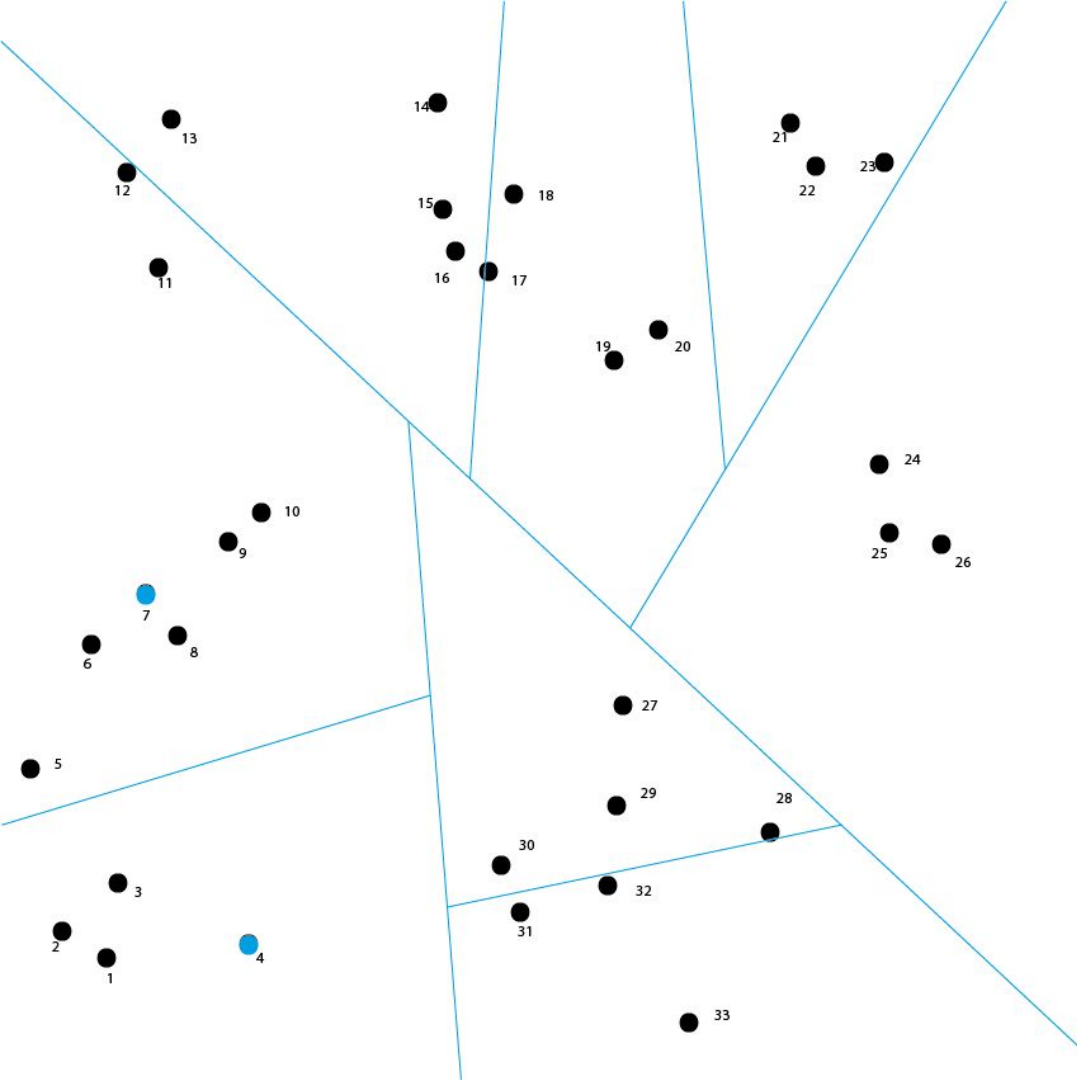


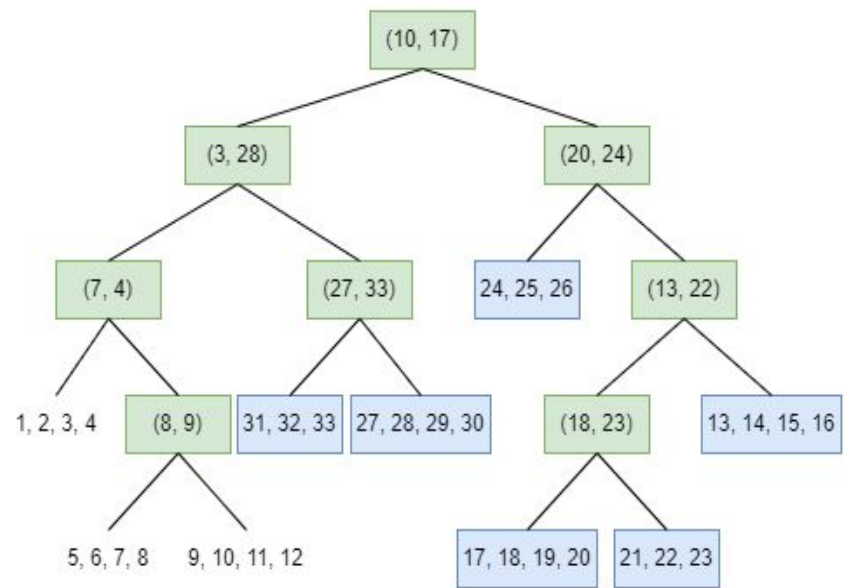
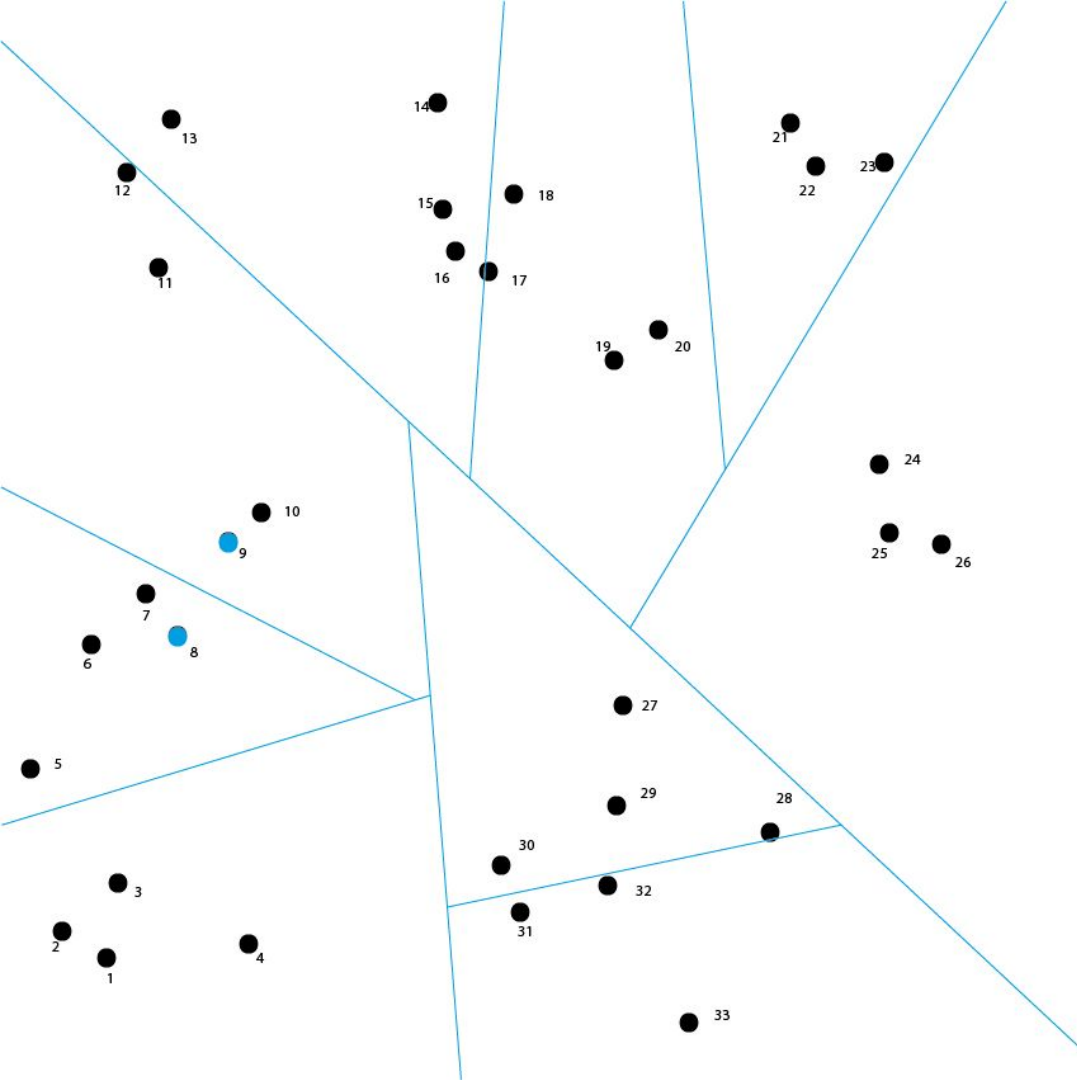


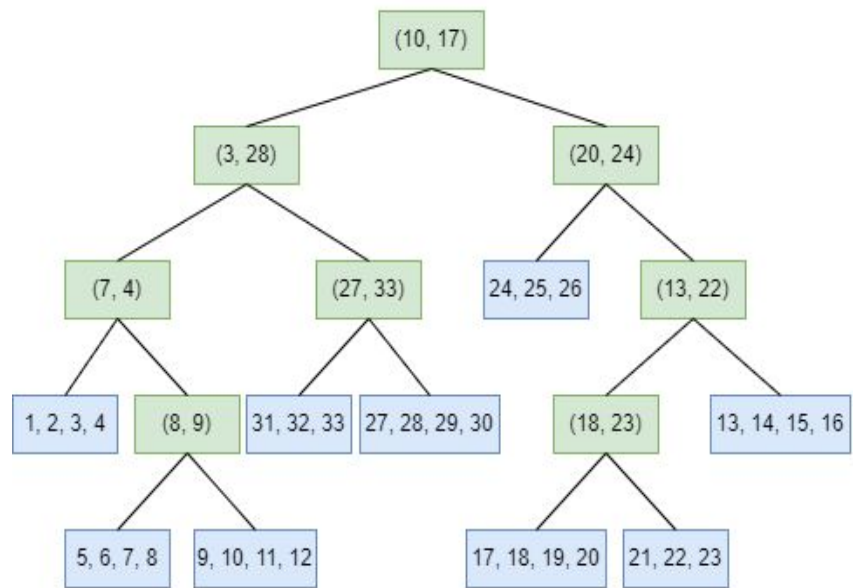
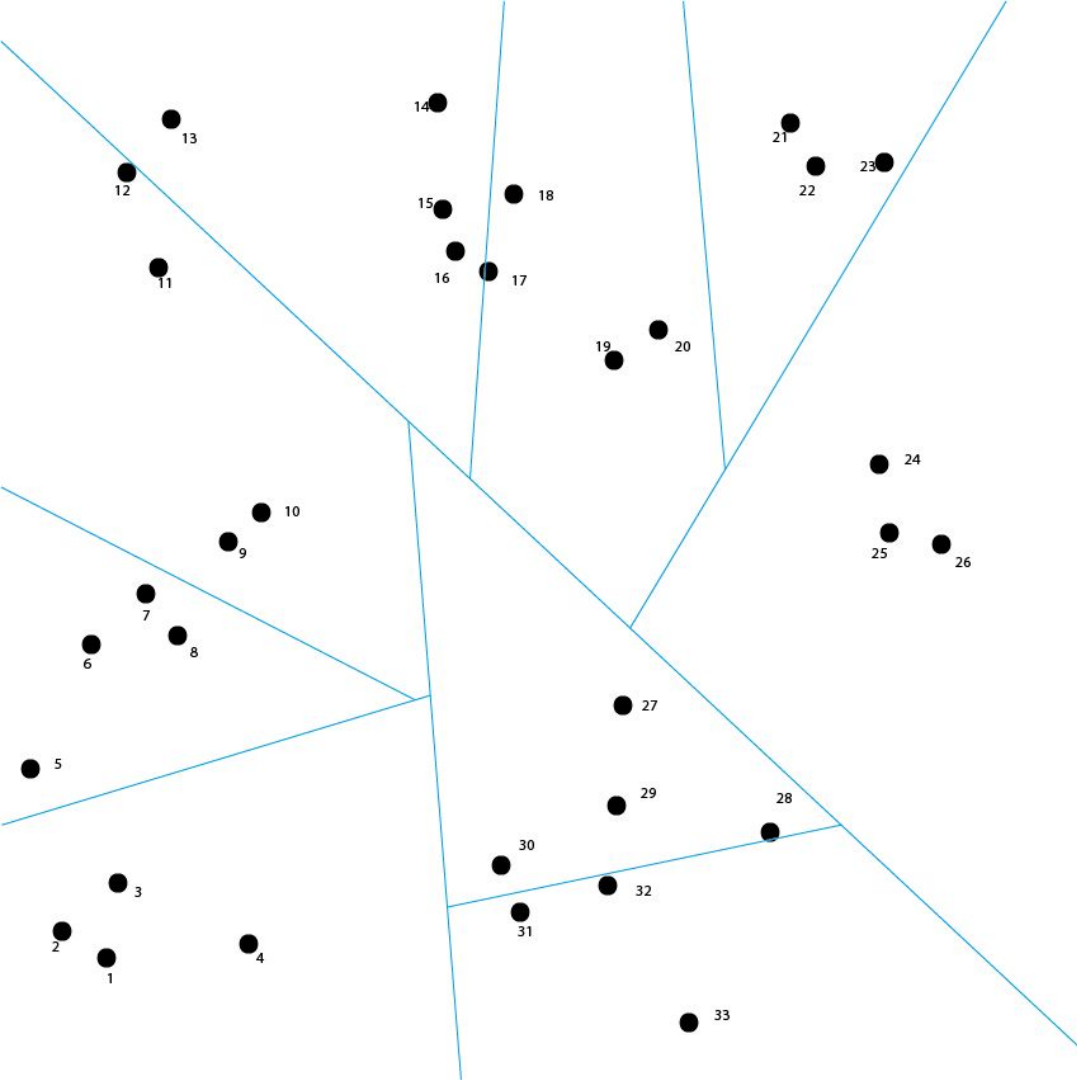


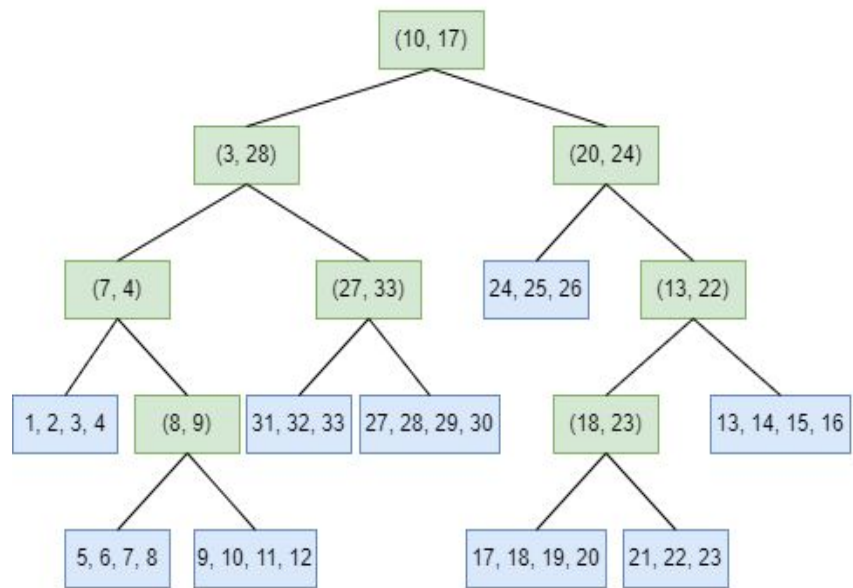
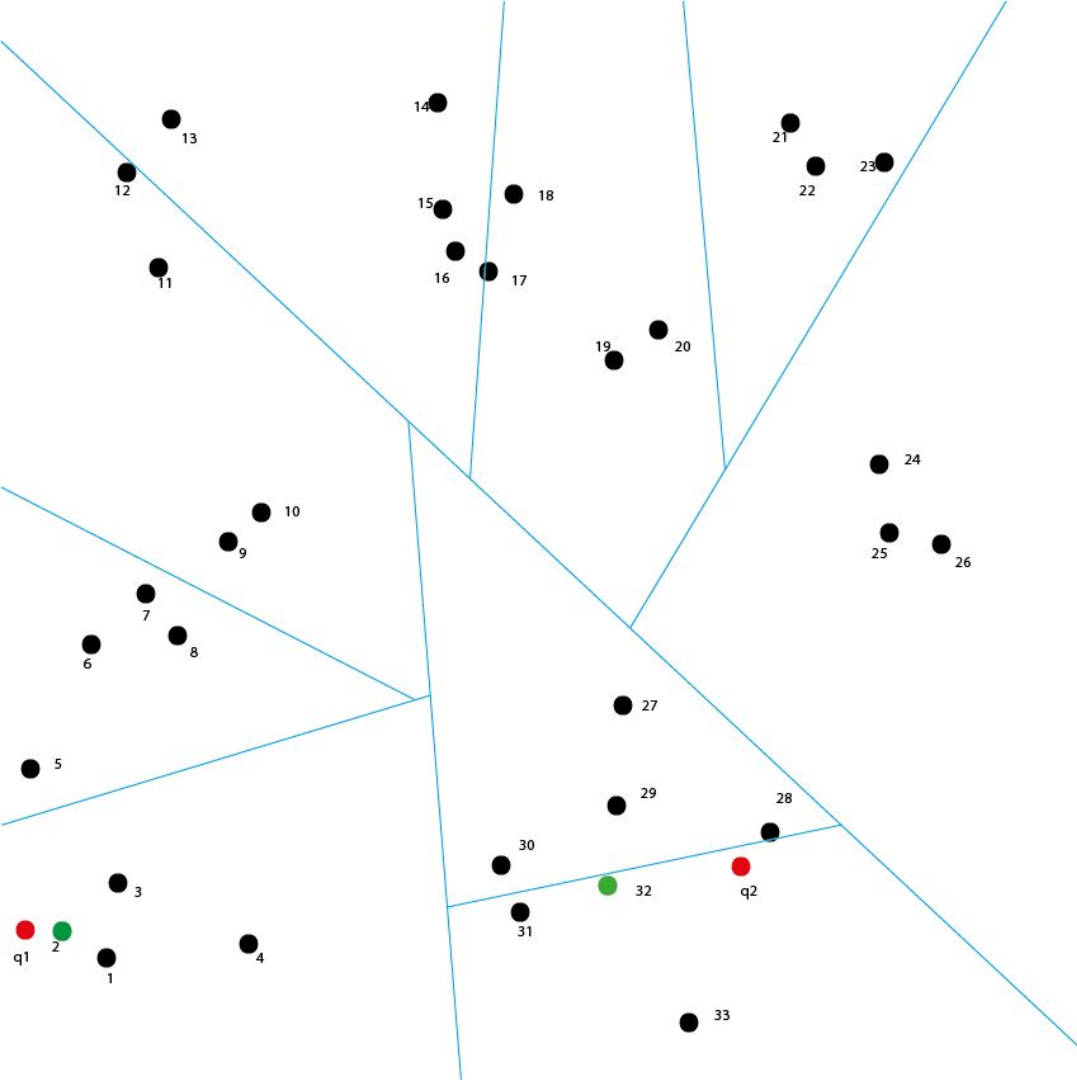


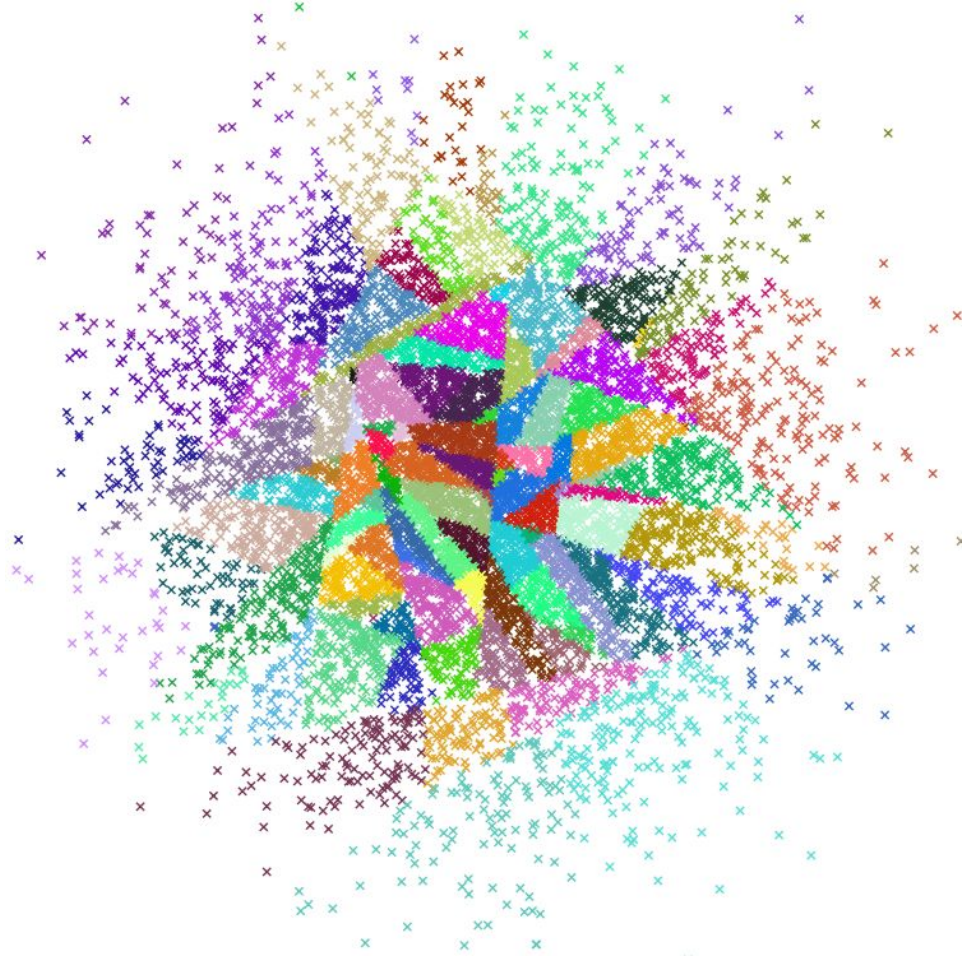












<https://github.com/spotify/annoy>