KNN Calculation

age = $[21, 20, 22, 22, 23, 21, 25, 30, 31]$

income = $[60, 55, 60, 61, 65, 62, 65, 70, 68]$

here, $K = 3$

input value $x = 22$

distance, $d(p,q) = \sqrt{(p-q)^2}$

NO	age	income	distance, d
a	21	60	$\sqrt{(22-21)^2} = 1$
b	20	55	$\sqrt{(22-20)^2} = 2$
c	22	60	$\sqrt{(22-22)^2} = 0$
d	22	61	$\sqrt{(22-22)^2} = 0$
e	23	65	$\sqrt{(22-23)^2} = 1$
f	21	62	$\sqrt{(22-21)^2} = 1$
g	25	65	$\sqrt{(22-25)^2} = 3$
h	30	70	$\sqrt{(22-30)^2} = 8$
i	31	68	$\sqrt{(22-31)^2} = 9$

Here,

$c < d < a < e < f < b < h < i$

$mean = \dfrac{60 + 61 + 60}{3} = 60.333333\ldots$

So, the Predicted income age = 22 is $60.333\ldots$