3NN Homework

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Data

Aa Page	☰ T1	☰ T2	☰ T3	☰ T4	☰ Class
P1	0.1	0.4	0.1	0.3	Sport
P2	0.1	0.2	0.5	0.4	Art
P3	0.4	0.1	0.1	0.3	Sport
P4	0.2	0.4	0.1	0.3	Art
P5	0.2	0.1	0.5	0.4	Sport
P6	0.1	0.1	0.1	0.2	Sport

Predict Class Of The New Sample

$Px = [0.2, 0.2, 0.3, 0.5]$

sim function: dot product

$sim(px, p1) = 0.28$

$sim(px, p2) = 0.41$

$sim(px, p3) = 0.28$

$sim(px, p4) = 0.30$

$sim(px, p5) = 0.41$

$sim(px, p6) = 0.17$

Sort the results:

$sim(px, p2) = 0.41 \rightarrow$ Art

$sim(px, p5) = 0.41 \rightarrow$ Sport

$sim(px, p4) = 0.30 \rightarrow$ Art

$sim(px, p1) = 0.28$

$sim(px, p3) = 0.28$

$sim(px, p6) = 0.17$

Predicted Class:

Px class: Art

The End