Scaler Dot Product

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The scaler dot product of two vectors is used to find if two vectors are facing each other. It is calculated using the following formula:

V = (V1, V2, V3 … Vn)

U = (U1, U2, U3 … Un)

V.U = (V1\*U1) + (V2\*U2) + (V3\*U3) + … (Vn\*Un)

If the value of the scaler dot product is positive, the two vectors are facing the same direction, if they are negative the vectors are facing in different directions and if the dot product is 0, the two vectors are perpendicular.

Example: V = (3, 4, -2) U = (2, -2, 6)

V.U = (3\*2) + (4\*-2) + (-2\*6)

V.U = 6 + (-8) + (-12)

V.U = 6 -8 -12

V.U = -14 Since -14 < 0 V is not facing U