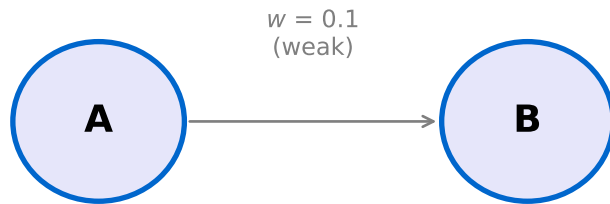


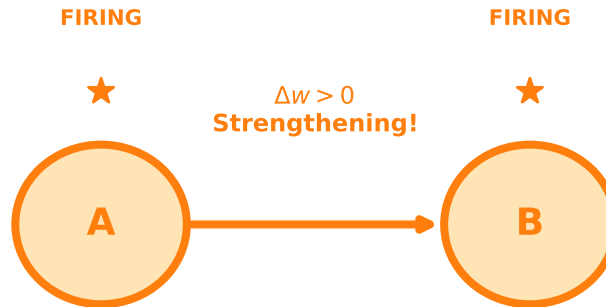
# Hebbian Learning: "Neurons That Fire Together, Wire Together" (Donald Hebb, 1949)

Before Learning



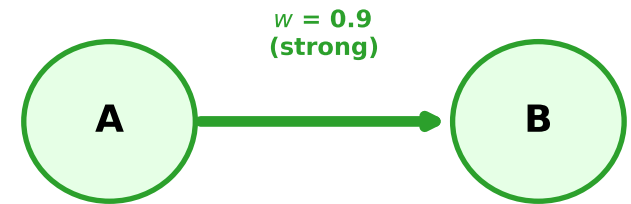
Neurons not firing together

During Learning



*"Neurons that fire together, wire together"*

After Learning



Connection permanently stronger

Hebb Rule:  $\Delta w_{ij} = \eta \cdot x_i \cdot x_j$  (weight increases when both neurons are active)