Figure 3.1. Nine noisy words (20% noise) are stored, and the tenth is used as a retrieval cue.
Figure 3.2. Recalling a stored sequence with a noisy (30% noise) retrieval cue.
Figure 3.3. Organization of a random-access memory. The selected memory location is shown by shading.
Figure 3.4. Organization of a sparse distributed memory. The first selected memory location is shown by shading.
Figure 3.5. Address space, hard locations, and the set activated by \( x \). \( H \) is the (Hamming) radius of activation.
Figure 3.6. Activation overlaps as weights for stored words. When reading at $X_T$, the sum $S_T$ includes one copy of the word $W_t$ from each hard location in the activation overlap (two copies in the figure).
Figure 3.7. Feed-forward artificial neural network.
Figure 3.8. Four views of an artificial neuron.
Figure 3.9. Sparse distributed memory as an artificial neural network (Fig. 3.7 redrawn in the style of Fig. 3.4).
Figure 3.10. Connections to an output neuron. Three output units are shown. The first unit is drawn as a column through the contents matrix $C$, the middle unit shows the connections explicitly, and the last unit corresponds to Figure 3.11.
Figure 3.11. Sketch of the cortex of the cerebellum. Ba = basket cell, Cl = climbing fiber (black), Go = Golgi cell, Gr = granule cell, Mo = mossy fiber (black), Pa = Parallel fiber, Pu = Purkinje cell (cross-hatched), St = stellate cell. Synapses are shown with small circles and squares of the axon’s “color.” Excitatory synapses are black or white, inhibitory synapses are cross-hatched or gray.
Figure 3.12. Sparse distributed memory’s resemblance to the cerebellum (Fig. 3.9 redrawn in the style of Fig. 3.11; see also Fig. 3.10).