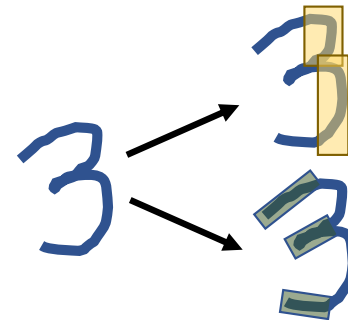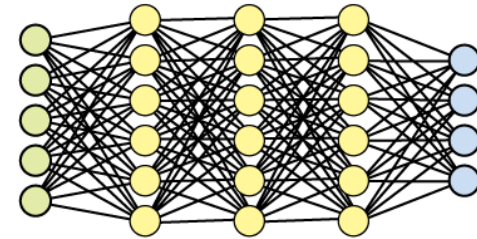**Different types of Artificial Neural Networks perform specialized tasks.**

- **Multi-Layer Perceptrons (MLP)**
  - Classification, input/output mappings.
  - "Backend" of many CNNs and RNNs.

- **Convolutional Neural Networks (CNN)**
  - Image recognition and computer vision.
  - Use *convolution* layer to identify geometric features.

- **Recurrent Neural Networks (RNN)**
  - Speech processing and synthesis
  - Like a MLP or CNN with "memory"
  - Used with sequential inputs that lack a clear beginning or end.

Alexa, play Today's Pop music...

Alexa, play Today's Pop music...

Artificial Neural Networks can be fooled.

speakers

preying mantis

dog

Artificial Neural Networks can be fooled.

speakers

ostrich

preying mantis

ostrich

dog

ostrich

Artificial Neural Networks can be fooled.

speakers — ostrich

preying mantis — ostrich

dog — ostrich