Deep Learning
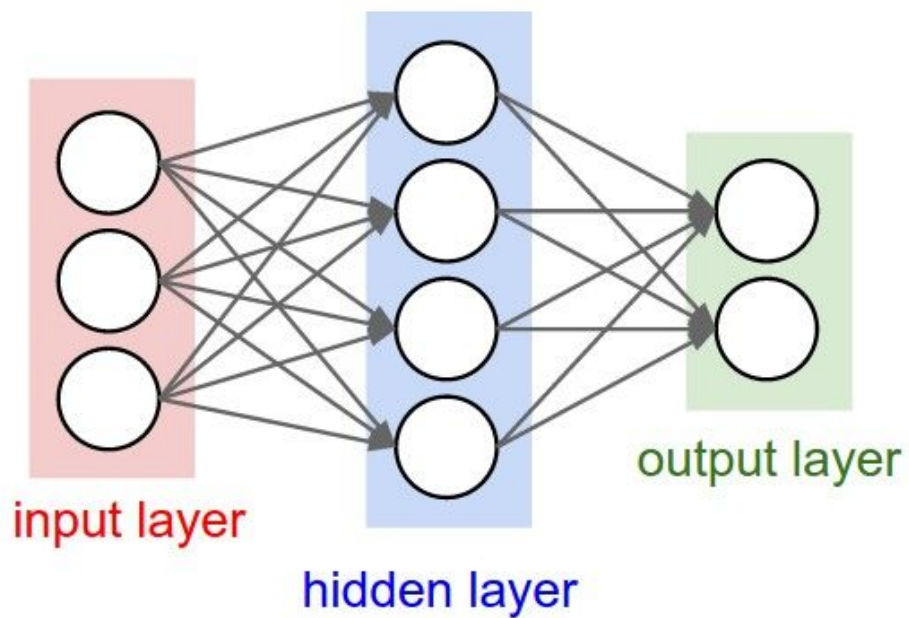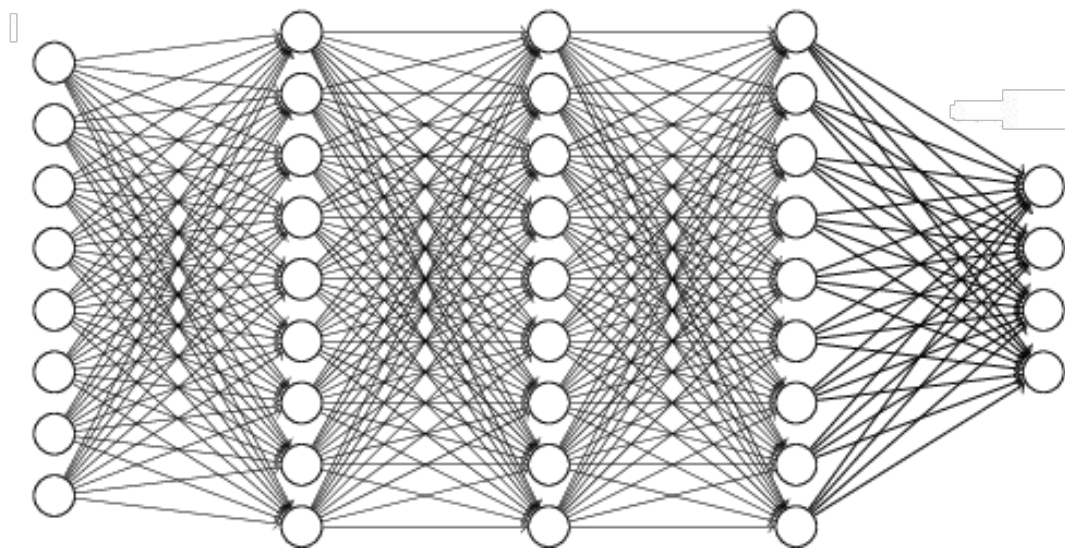
Типы нейросетей

Нейросеть

Нейросеть

A mostly complete chart of

Neural Networks

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Legend
- ○ Backfed Input Cell
- ● Input Cell
- △ Noisy Input Cell
- ● Hidden Cell
- ◉ Probablistic Hidden Cell
- △ Spiking Hidden Cell
- ● Output Cell
- ◉ Match Input Output Cell
- ● Recurrent Cell
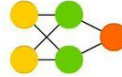- ◉ Memory Cell
- △ Different Memory Cell
- ● Kernel
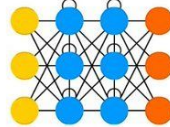- ○ Convolution or Pool

Perceptron (P)

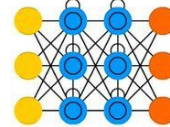Feed Forward (FF)

Radial Basis Network (RBF)
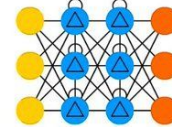
Deep Feed Forward (DFF)
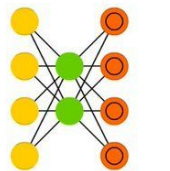
Recurrent Neural Network (RNN)

Long / Short Term Memory (LSTM)

Gated Recurrent Unit (GRU)

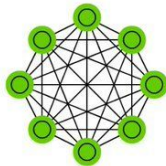Auto Encoder (AE)

Variational AE (VAE)

Denoising AE (DAE)

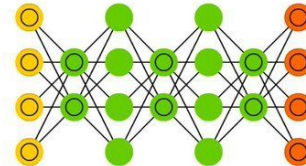Sparse AE (SAE)

Markov Chain (MC)
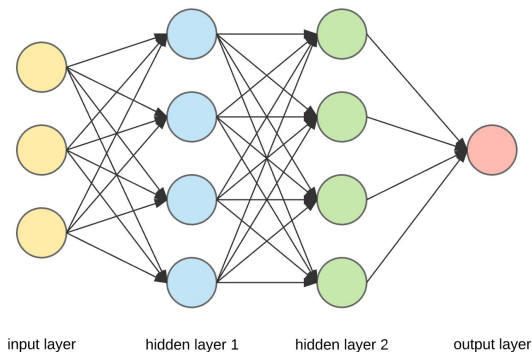
Hopfield Network (HN)

Boltzmann Machine (BM)

Restricted BM (RBM)

Deep Belief Network (DBN)
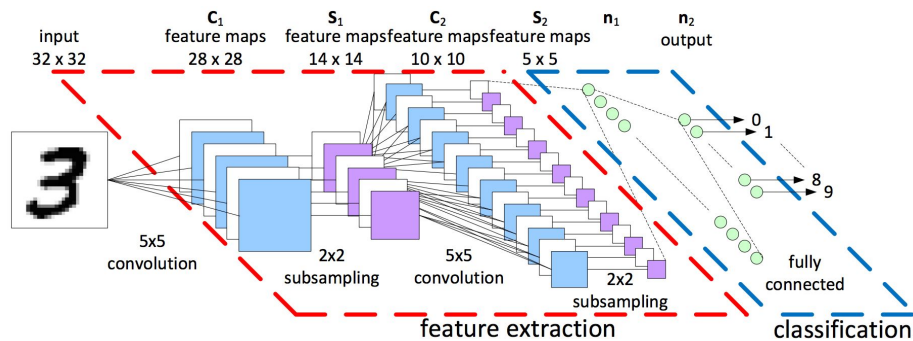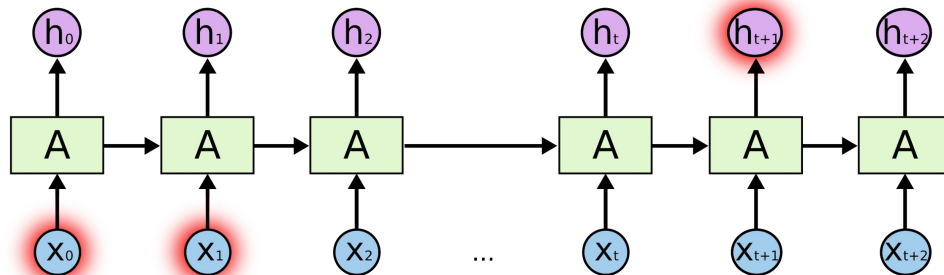
Dense =
Fully Connected =
Multi Layered Perceptron

input layer   hidden layer 1   hidden layer 2   output layer

Convolutional Neural Networks

input
32 x 32

C_1
feature maps
28 x 28

S_1
feature maps
14 x 14

C_2
feature maps
10 x 10

S_2
feature maps
5 x 5

n_1

n_2
output

5x5
convolution

2x2
subsampling

5x5
convolution

2x2
subsampling

fully
connected

feature extraction

classification

0
1

8
9

Recurrent Neural Networks

h_0 h_1 h_2 h_t h_{t+1} h_{t+2}

A A A A A A

x_0 x_1 x_2 ... x_t x_{t+1} x_{t+2}