Deep Learning: Layer Types

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Deep Learning: Layer Types

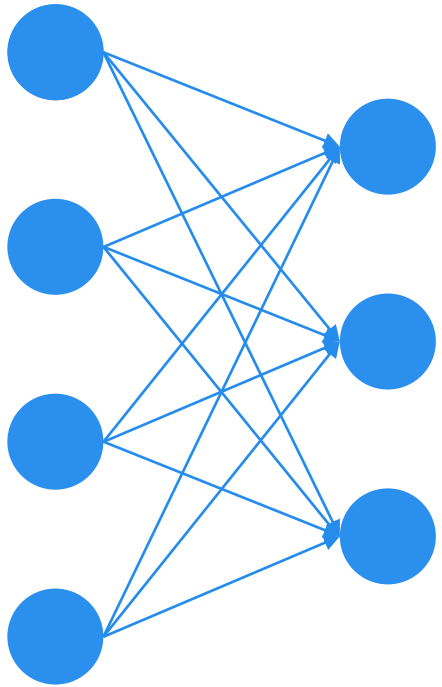
Input Layer

- Corresponds to independent variables
- Taken as batches
- Binned data
- Categorized data

Deep Learning: Layer Types

Dense Layer

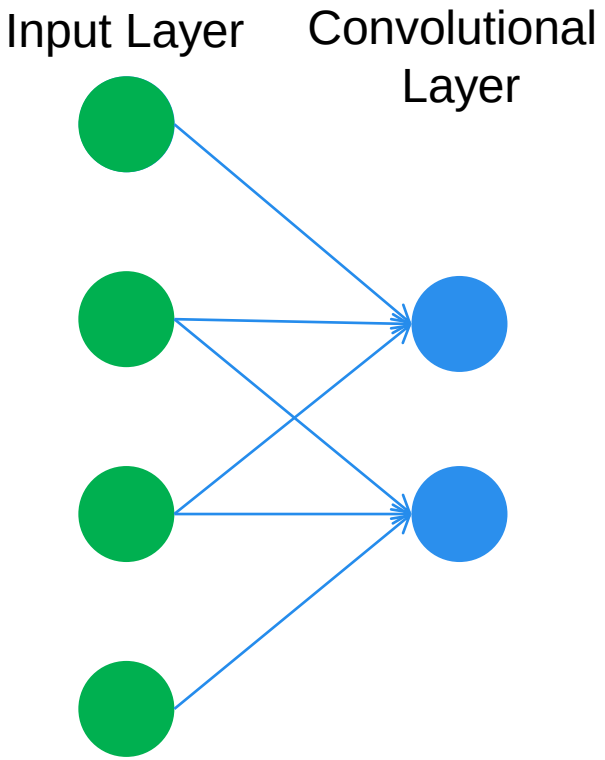
- Each input layer is connected to each output layer
- Also called fully connected layer
- Usually non-linear activation function applied



Deep Learning: Layer Types

1D convolutional layer

- Layer consists of filters
- Sequentially a subset of input layer is processed
- All nodes of input layer used

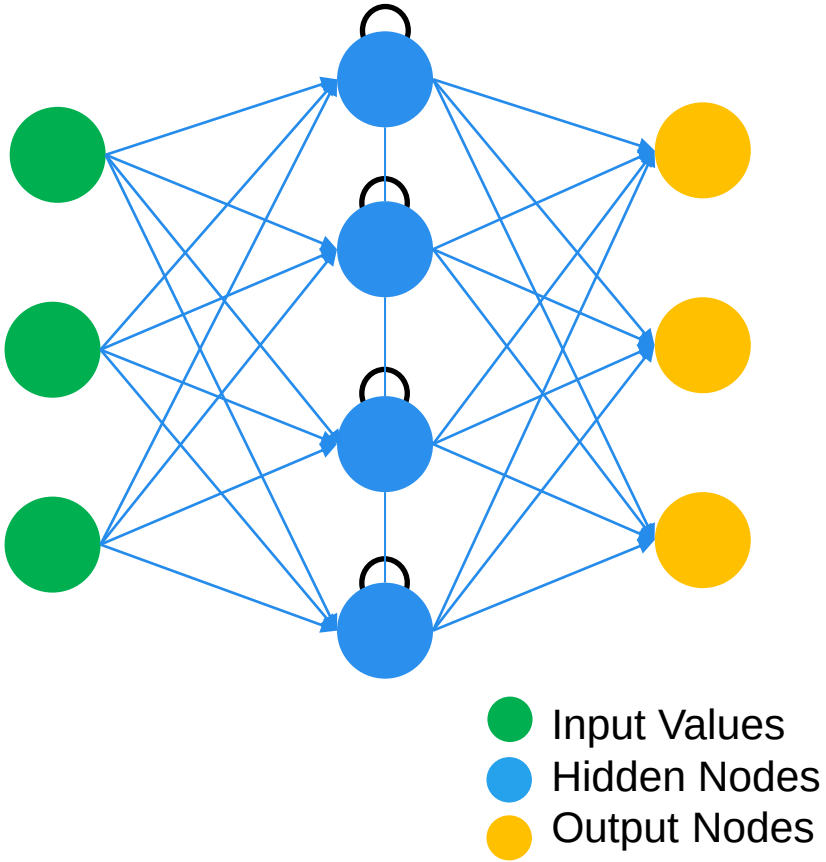


Deep Learning: Layer Types

Other Layer Types

- Recurrent Neural Networks
  - use recurrent cells
  - Receive their own output with a delay
  - applied when context plays a role

- Long short-term memory (LSTM)
  - use „memory cell“
  - Used for temporal sequences



Deep Learning Details

Layer Types

Output Layer

Problem Type	Nodes	Output Layer Activation
Regression	1	Linear
Multi-Target Regression	N (nr. of targets)	Linear
Binary Classification	1	Sigmoid
Multi-Label Classification	N (nr. of labels)	softmax