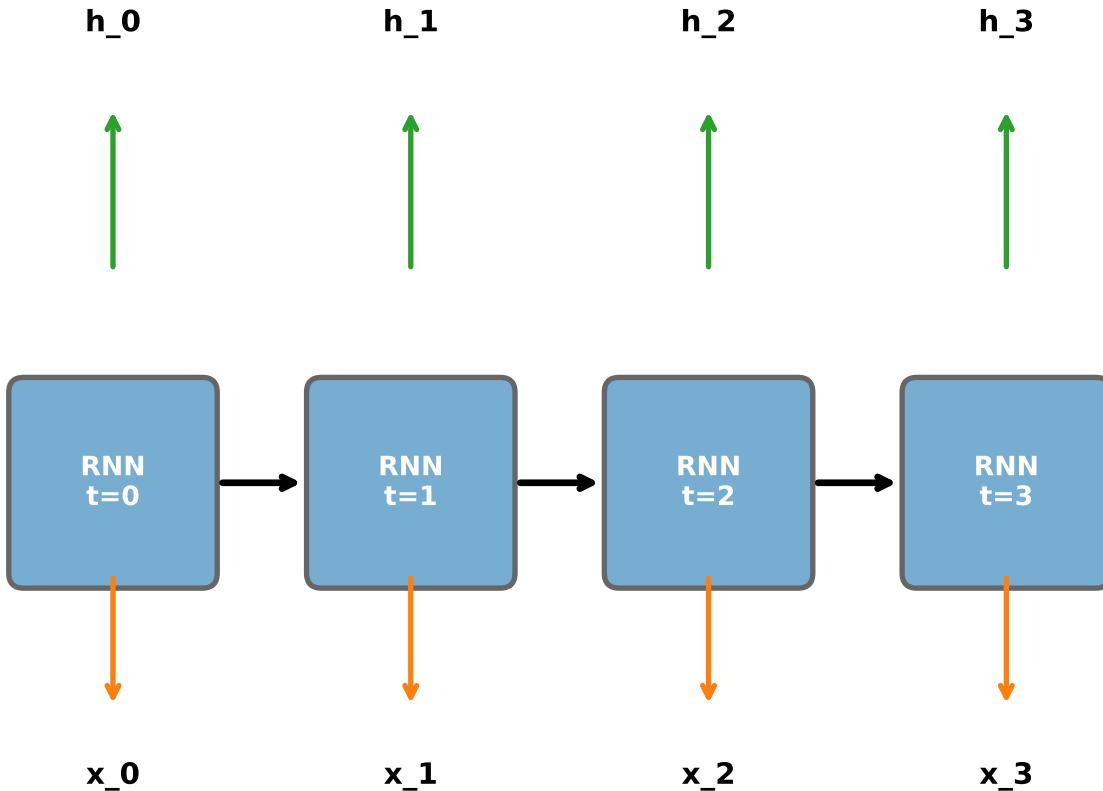


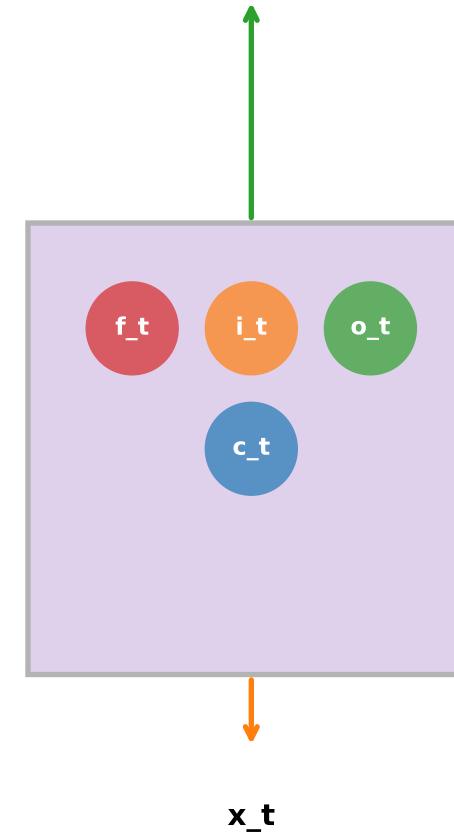
# Recurrent Neural Networks

## Recurrent Neural Network



$$h_t = \tanh(W_h h_{t-1} + W_x x_t + b)$$

## LSTM Cell $h_t$



*f: forget, i: input, o: output, c: cell state*