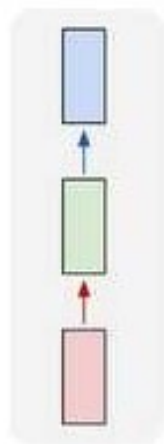
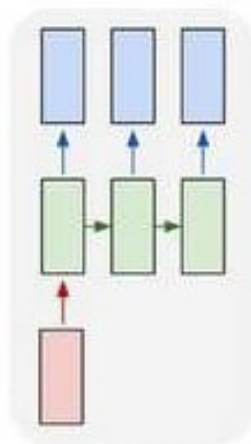


# DL: Рекуррентные сети

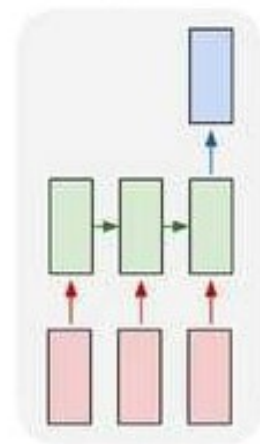
один к одному



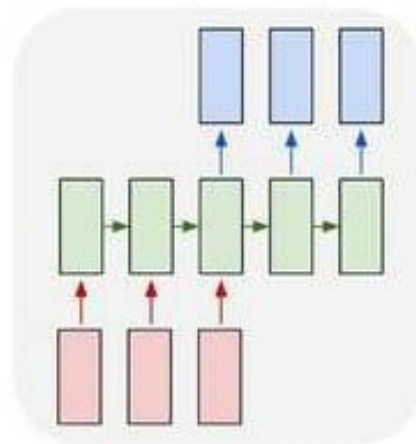
один ко многим



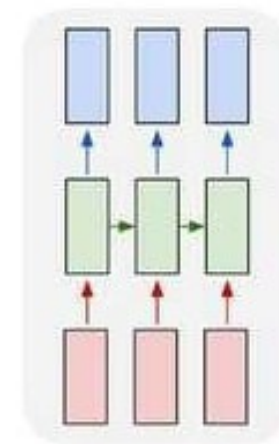
многие к одному



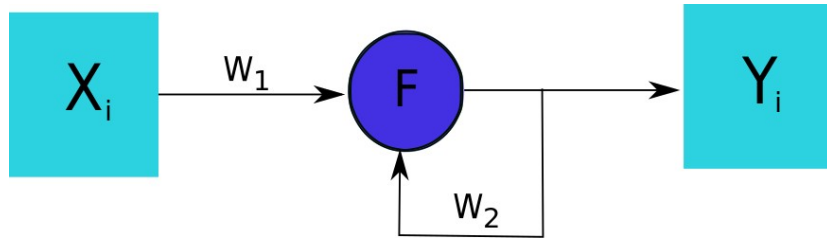
многие ко многим



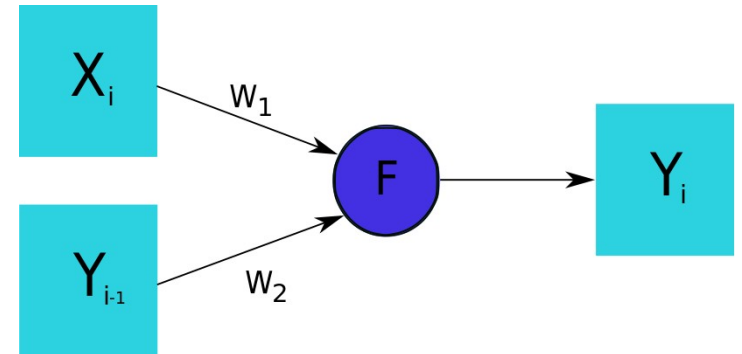
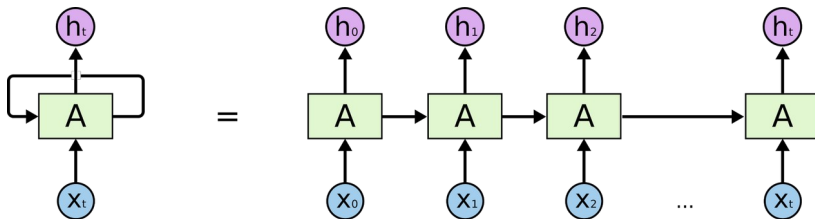
многие ко многим

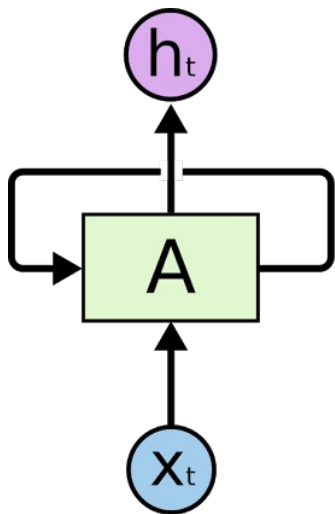


# Введение

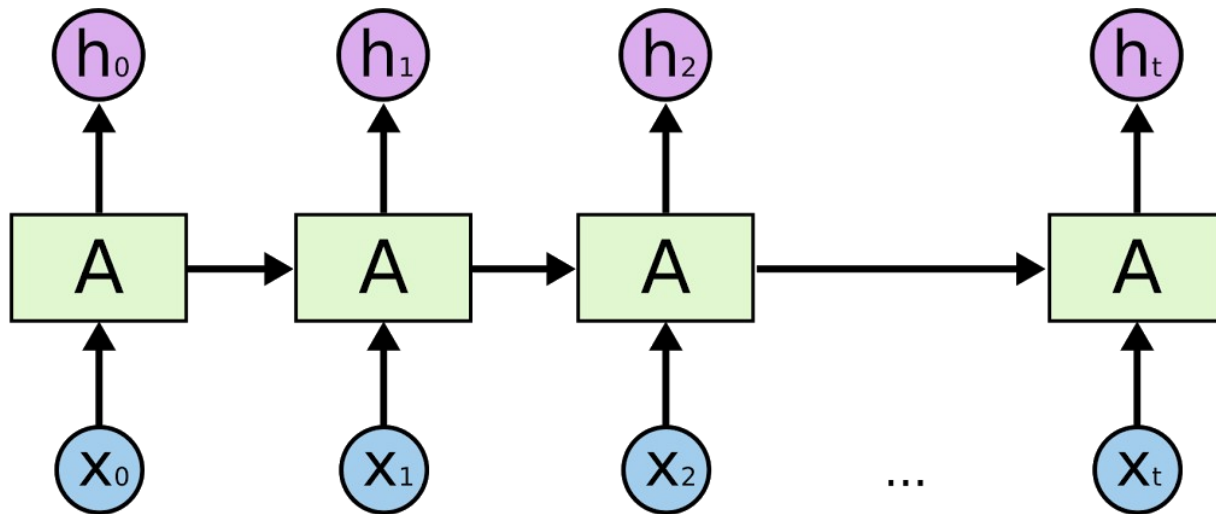


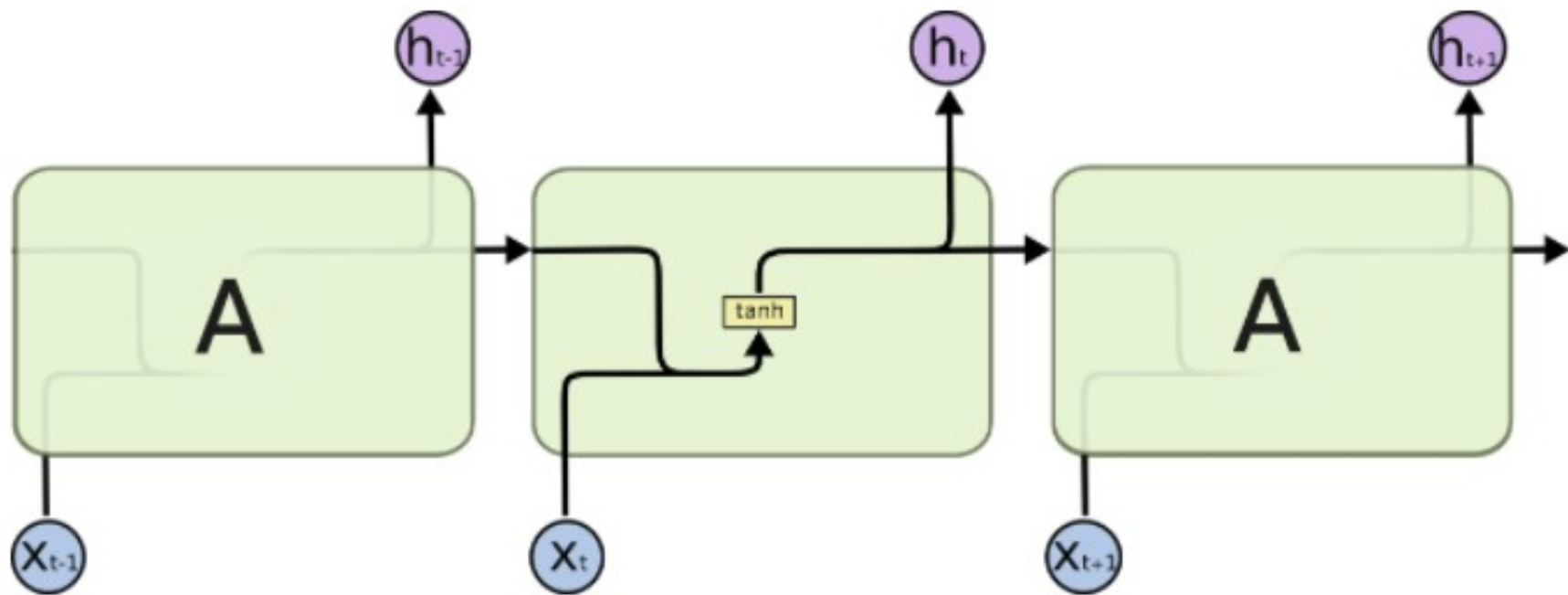
$$Y_i = f(w_1 X_i + w_2 Y_{i-1})$$

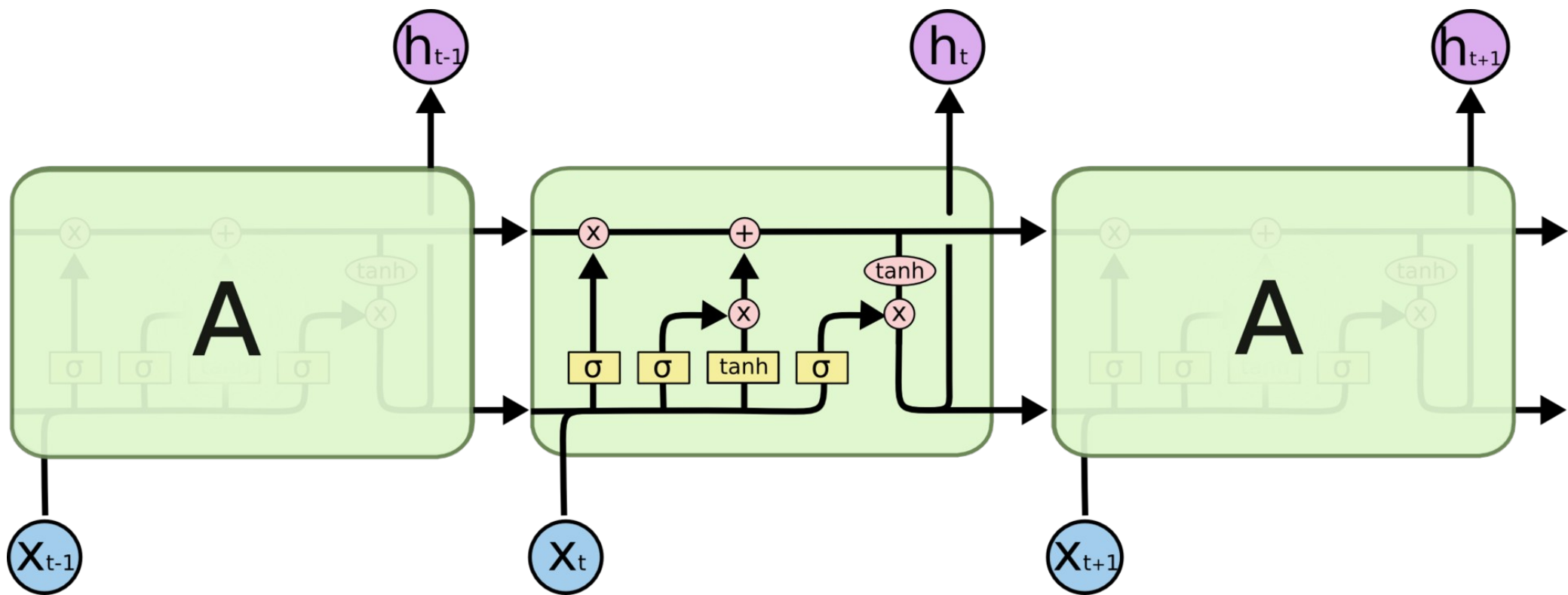


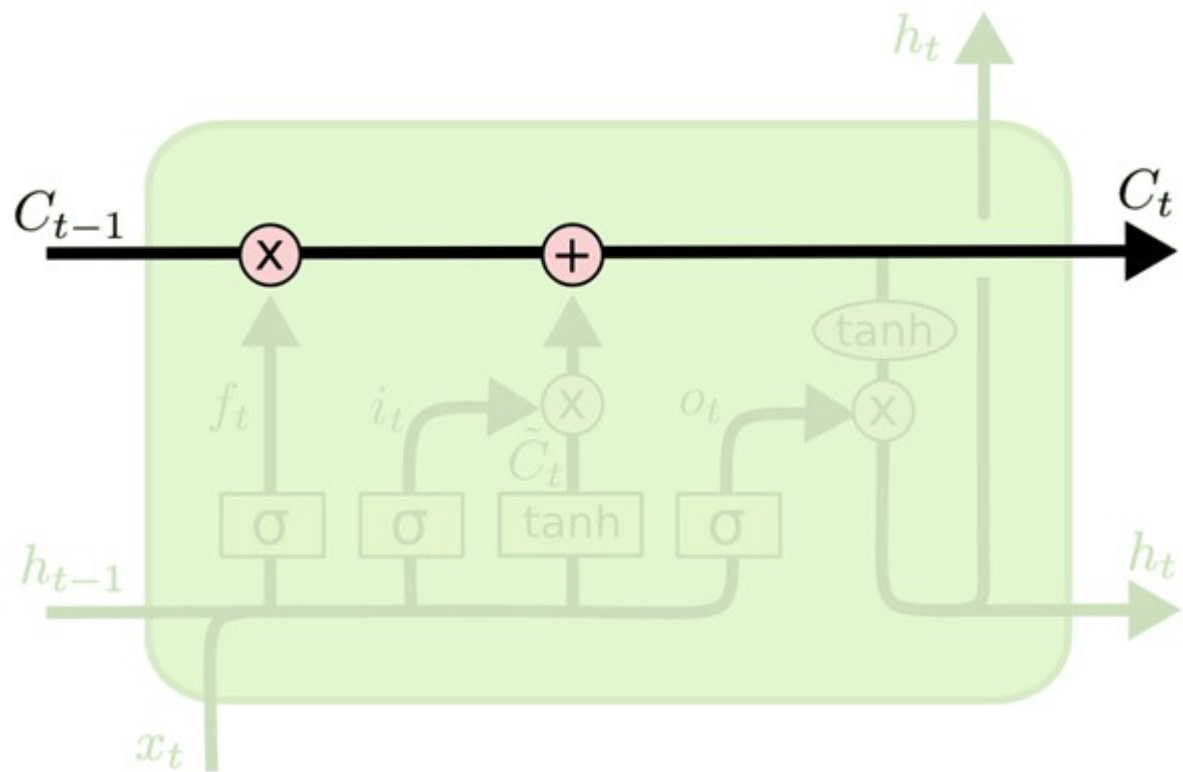


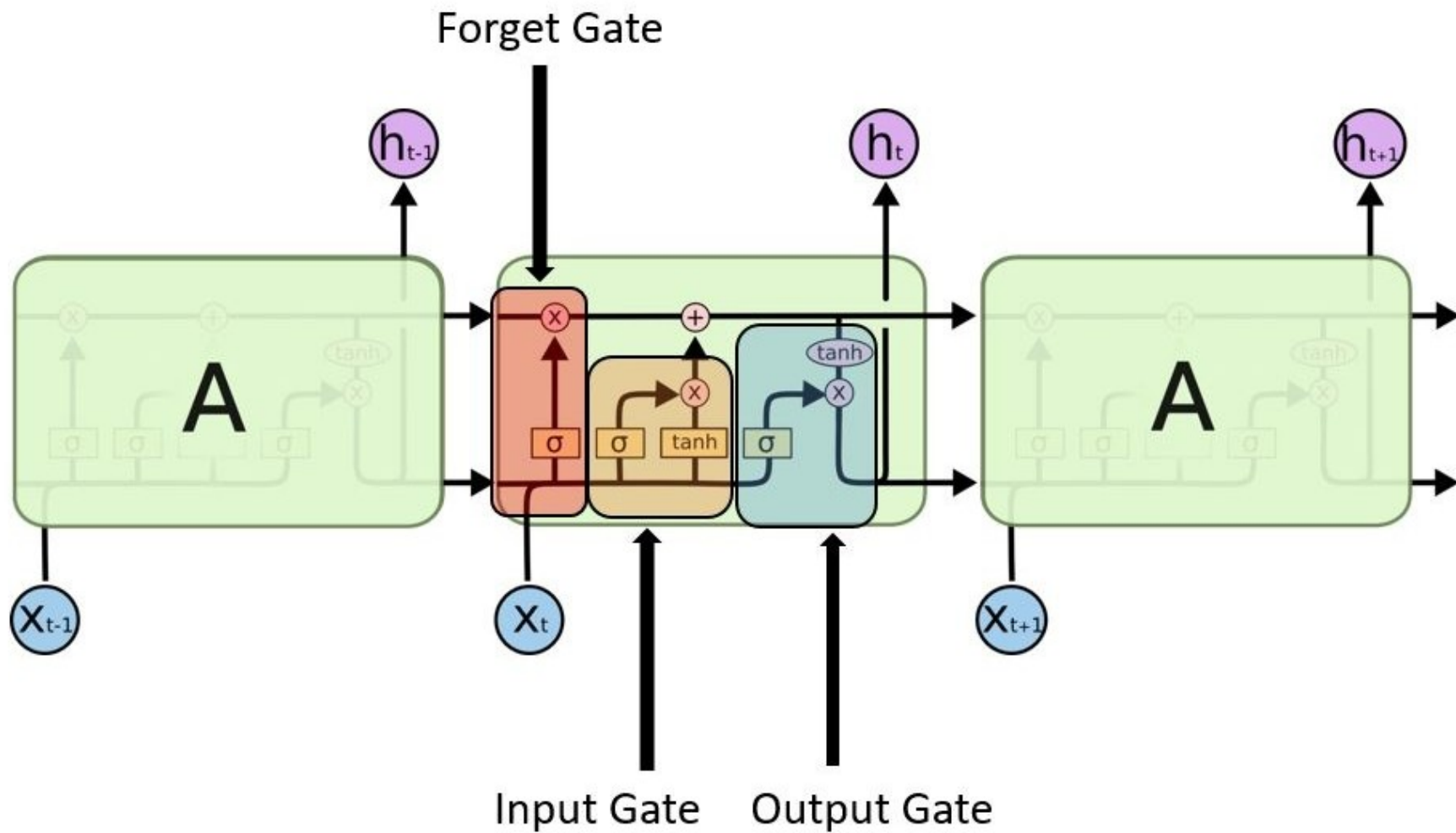
=



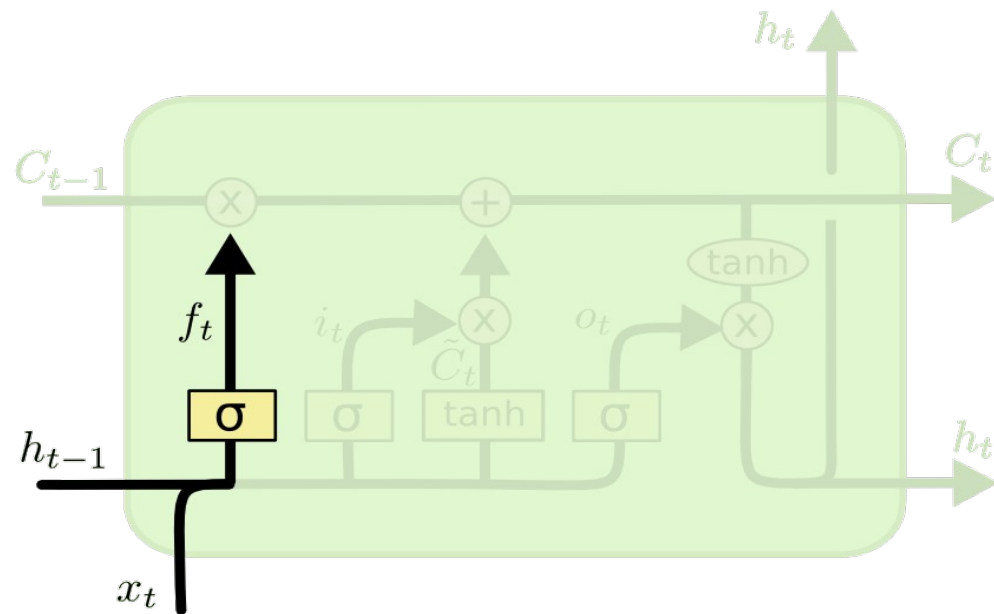




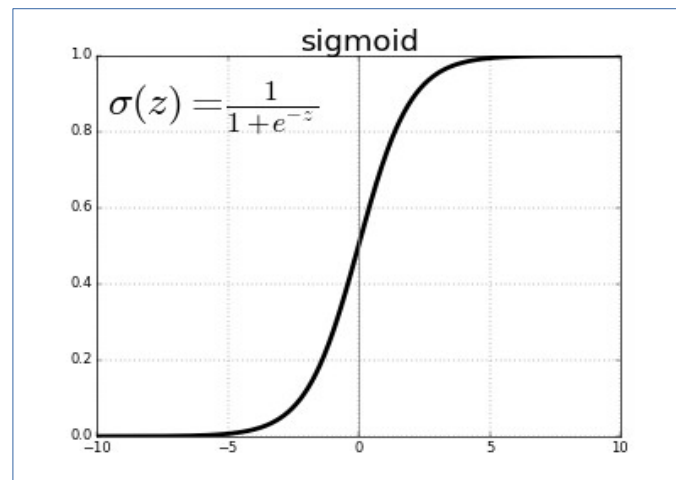


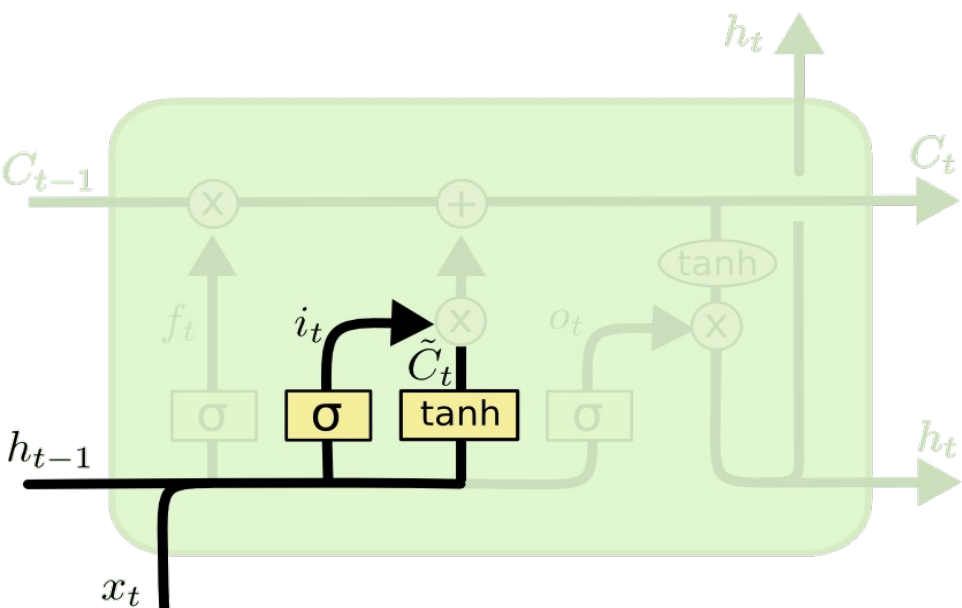






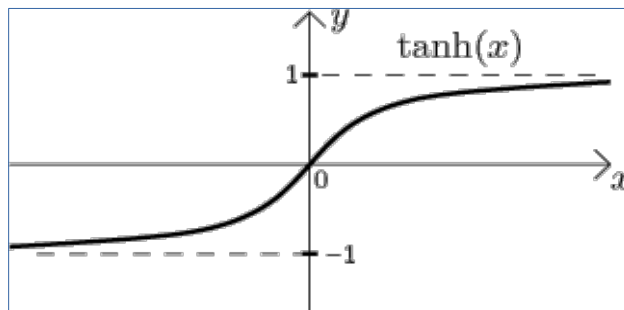
$$f_t = \sigma (W_f \cdot [h_{t-1}, x_t] + b_f)$$

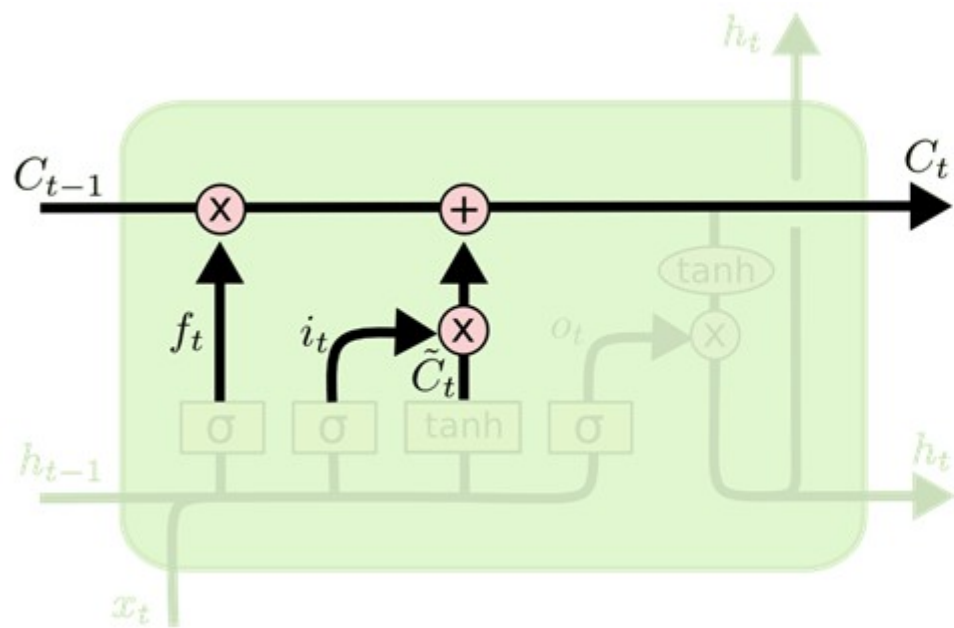




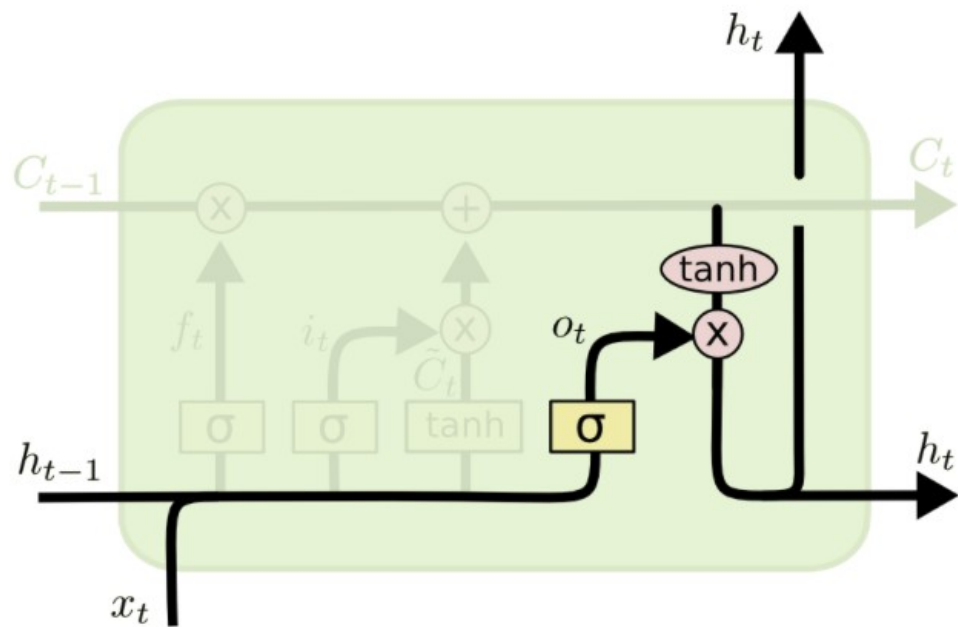
$$i_t = \sigma(W_i \cdot [h_{t-1}, x_t] + b_i)$$

$$\tilde{C}_t = \tanh(W_C \cdot [h_{t-1}, x_t] + b_C)$$



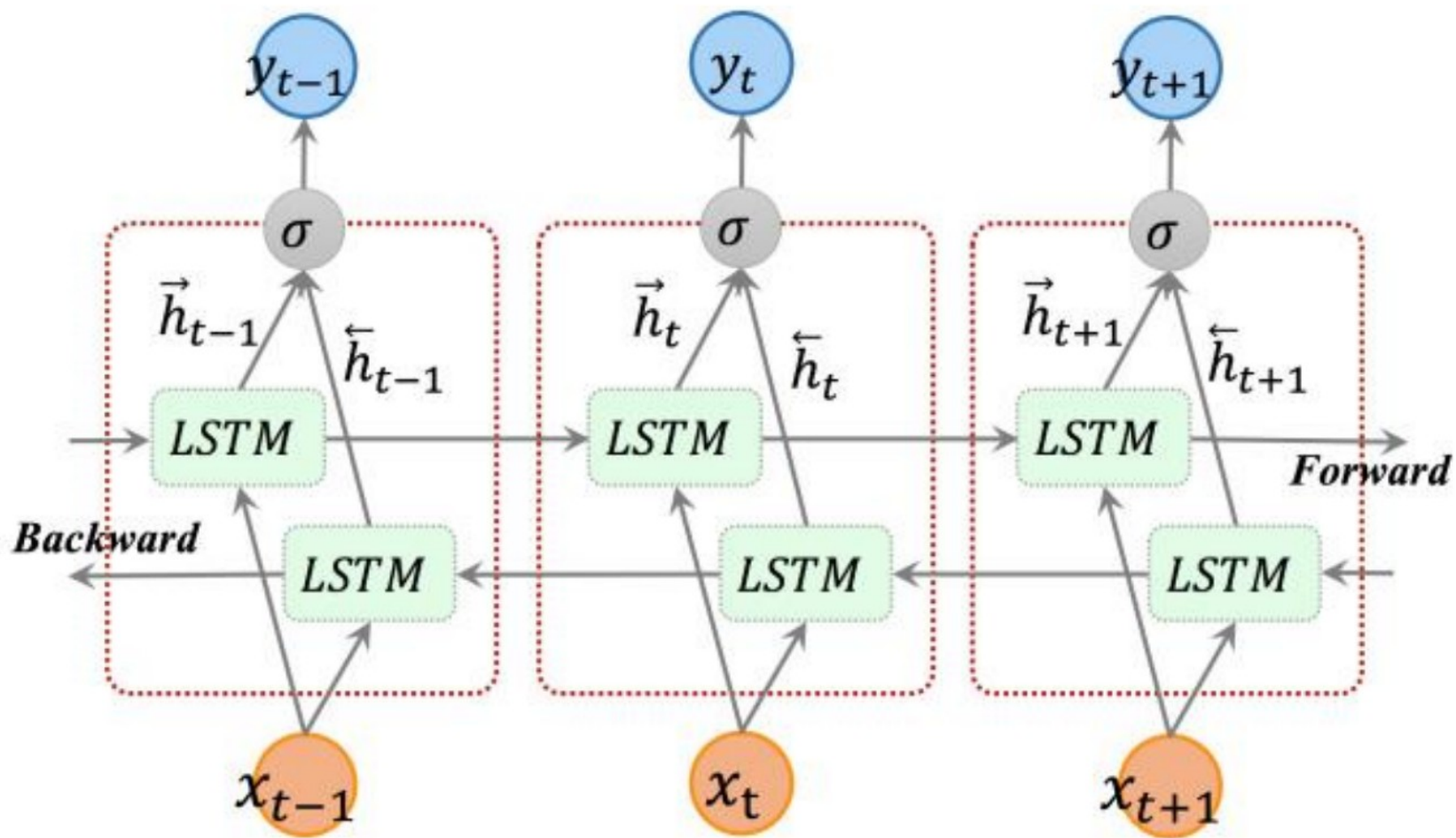


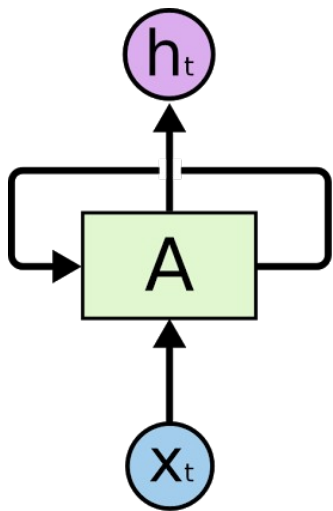
$$C_t = f_t * C_{t-1} + i_t * \tilde{C}_t$$



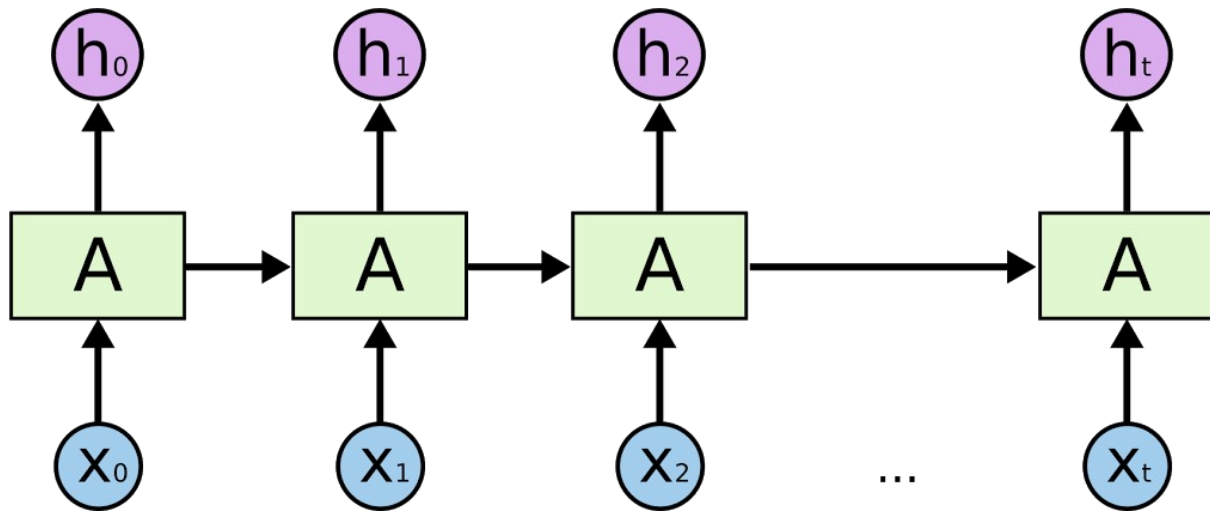
$$o_t = \sigma (W_o [h_{t-1}, x_t] + b_o)$$

$$h_t = o_t * \tanh (C_t)$$

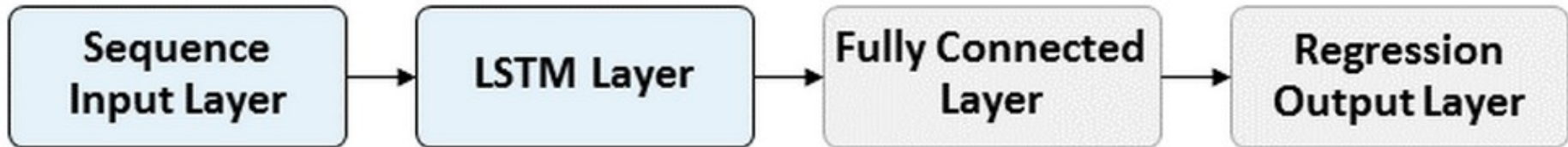




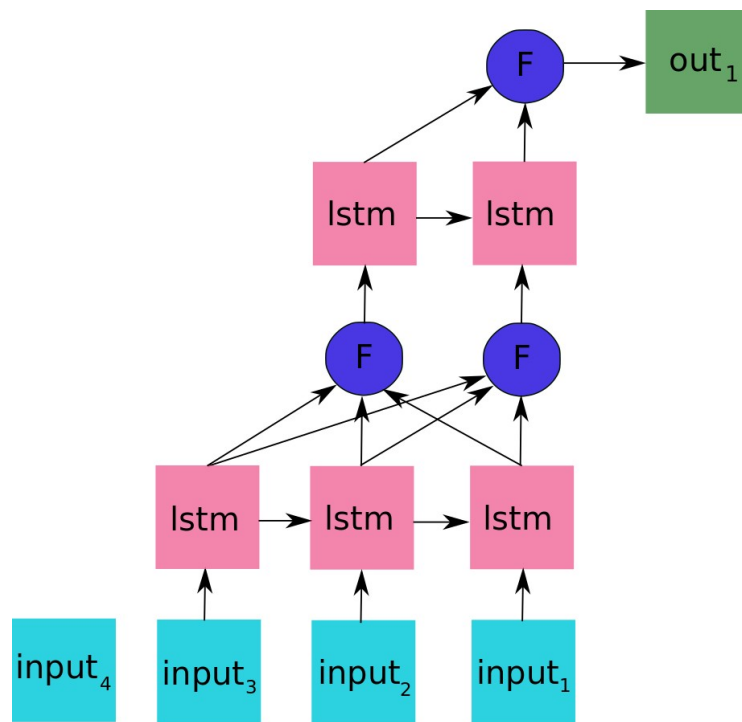
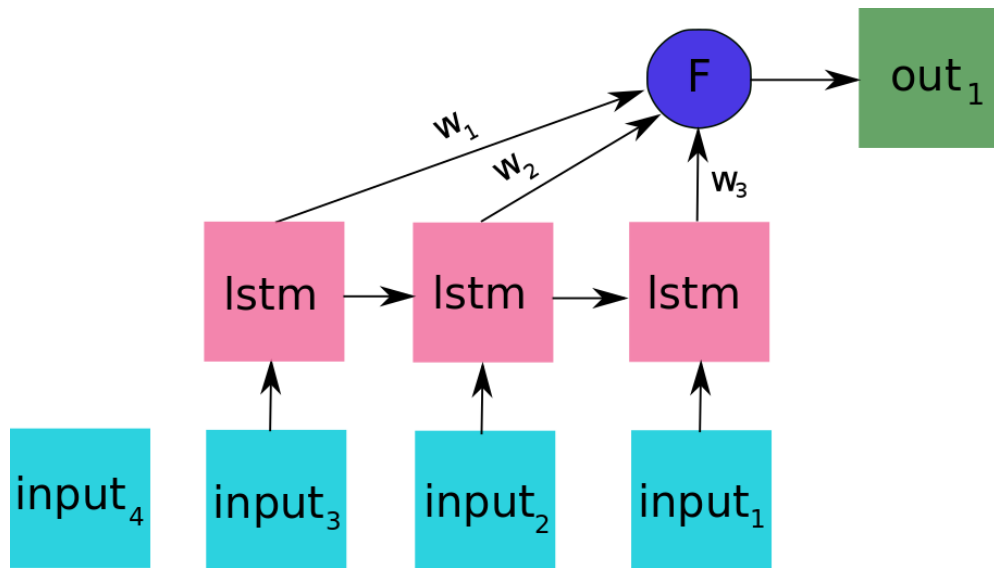
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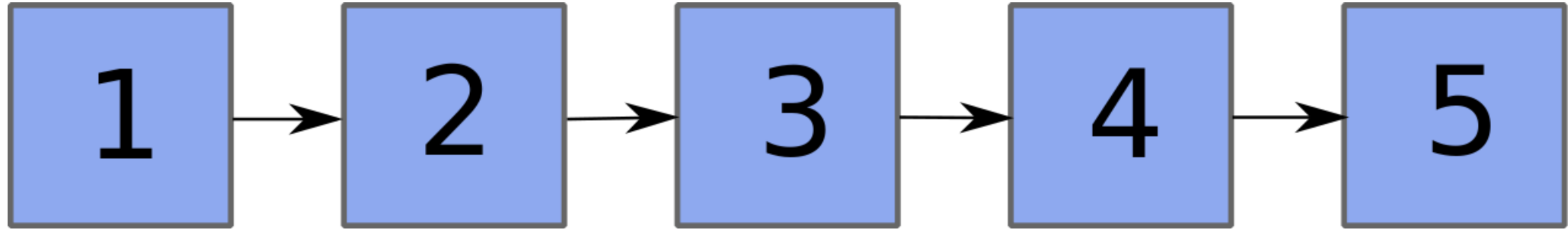
## LSTM архитектура

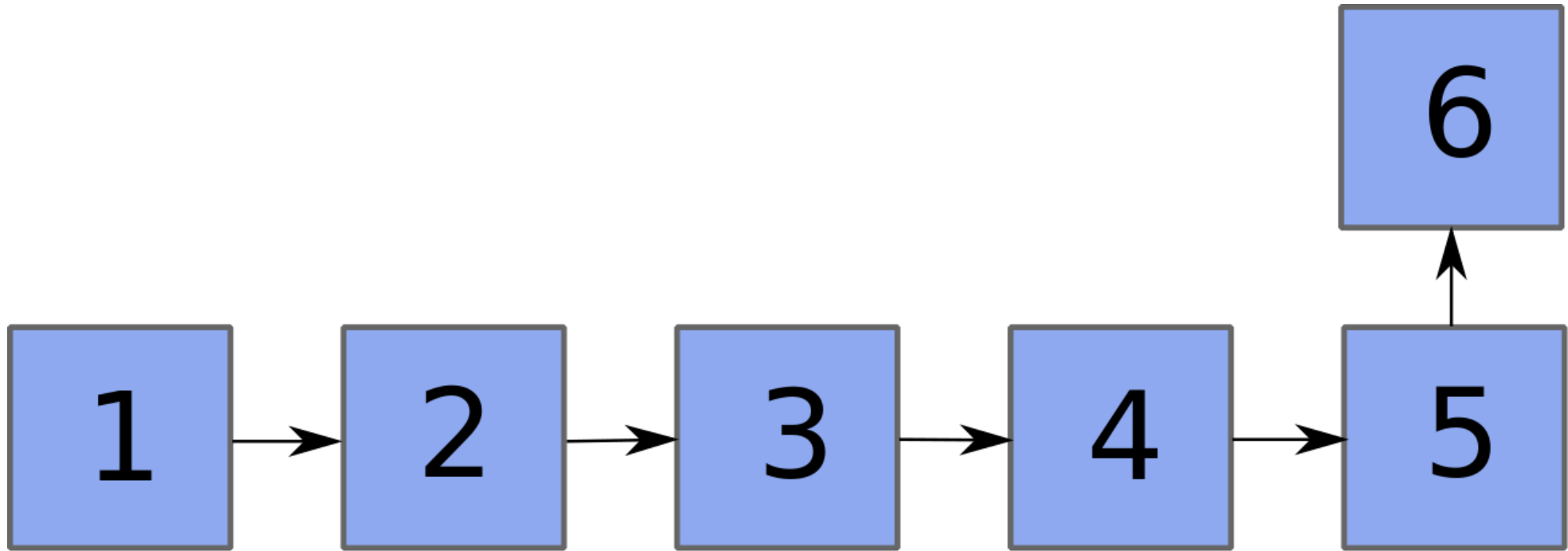


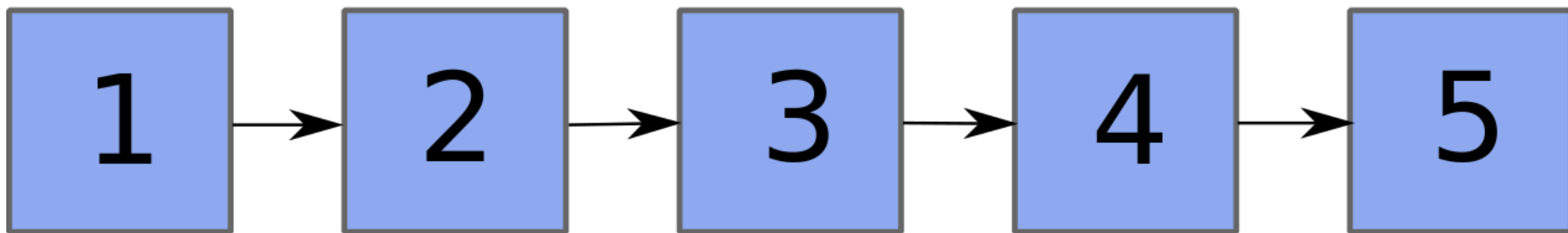
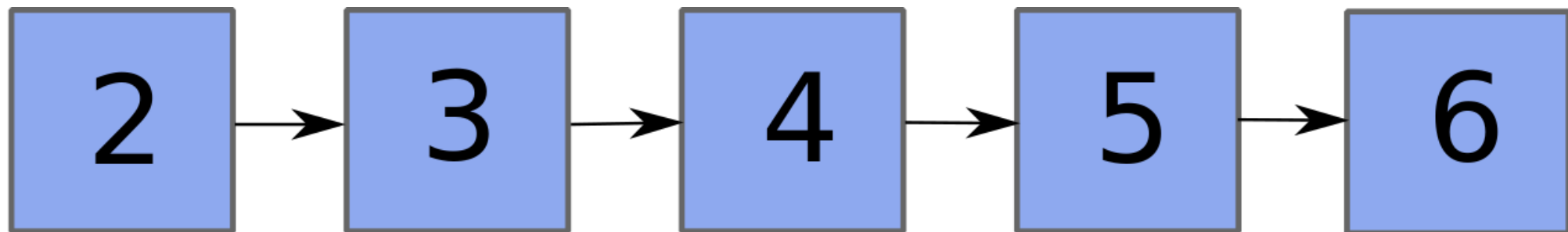
# LSTM архитектура





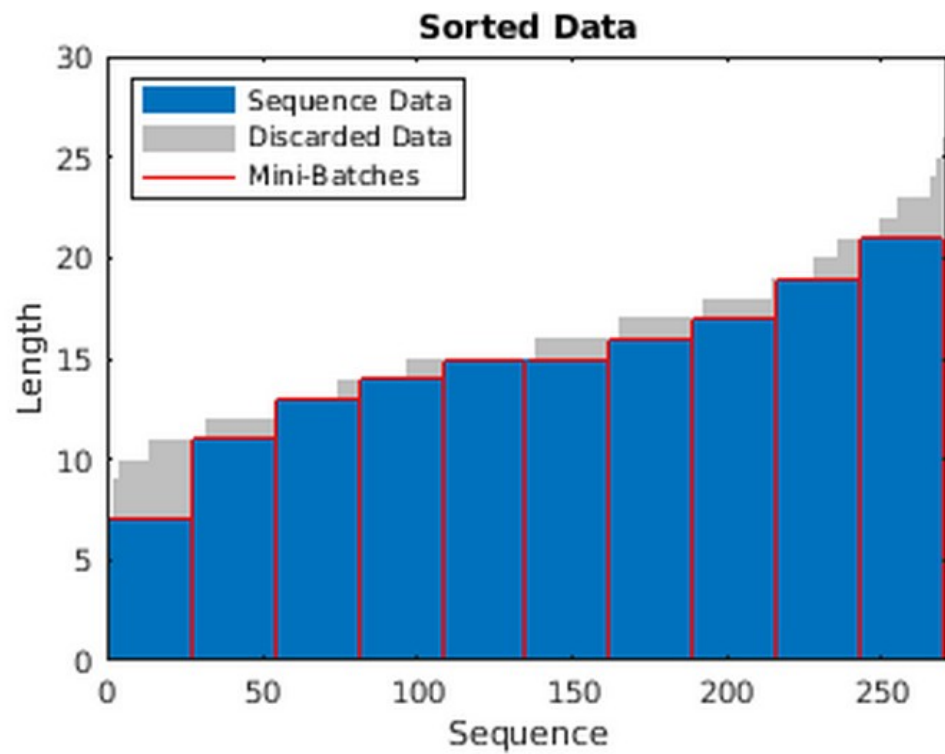
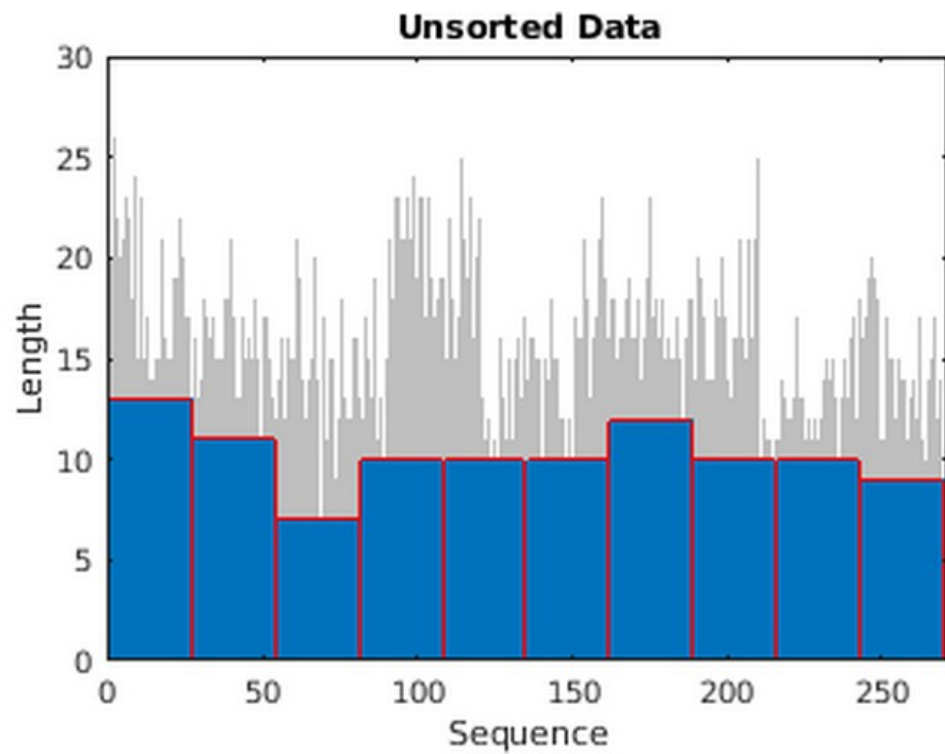


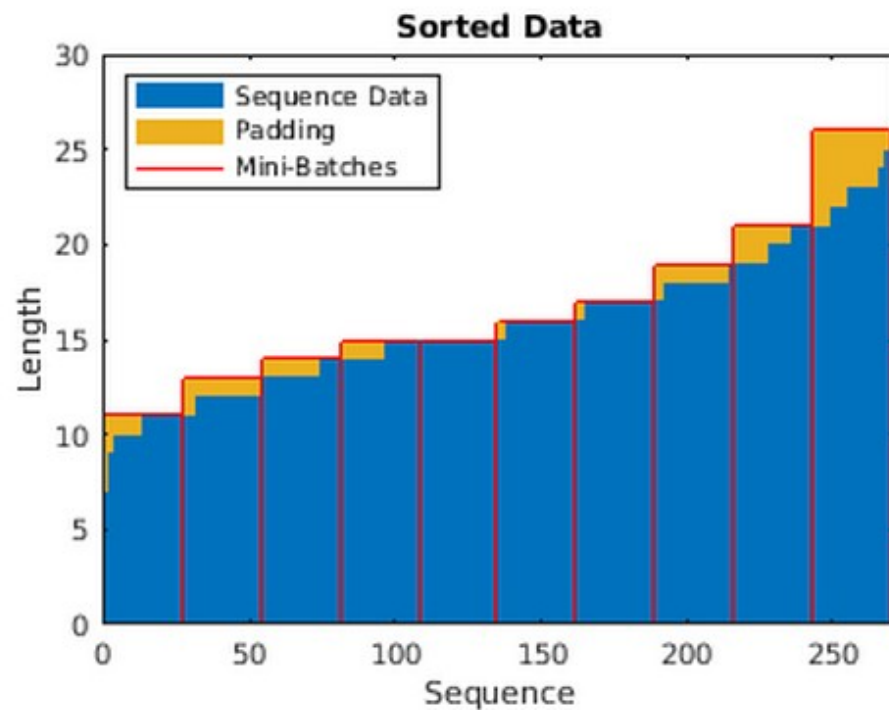
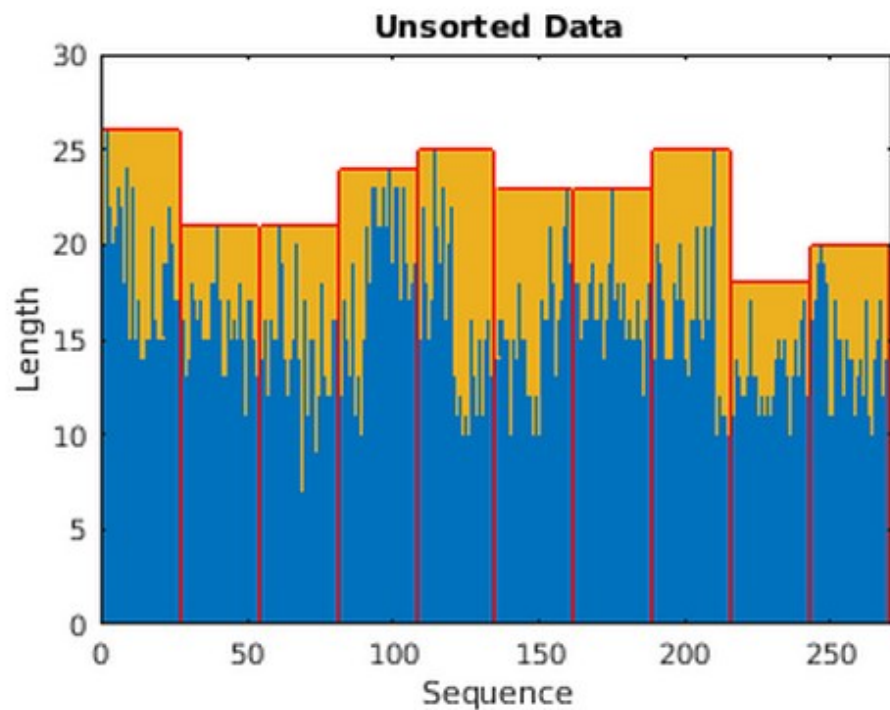




# Sequence to end

Фраза	Тональность
Мама мыла раму	Нейтральная
Видала я котов без улыбок, но улыбку без кота...	Удивление
Пока думаешь, что сказать, — делай реверанс!	Указание





# Алго трейдинг

