GRU
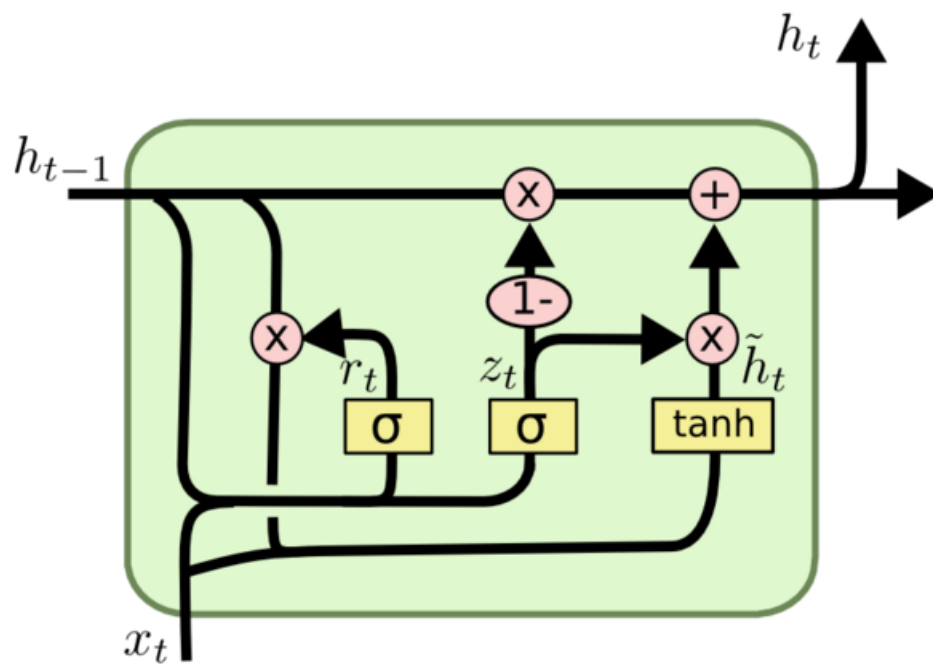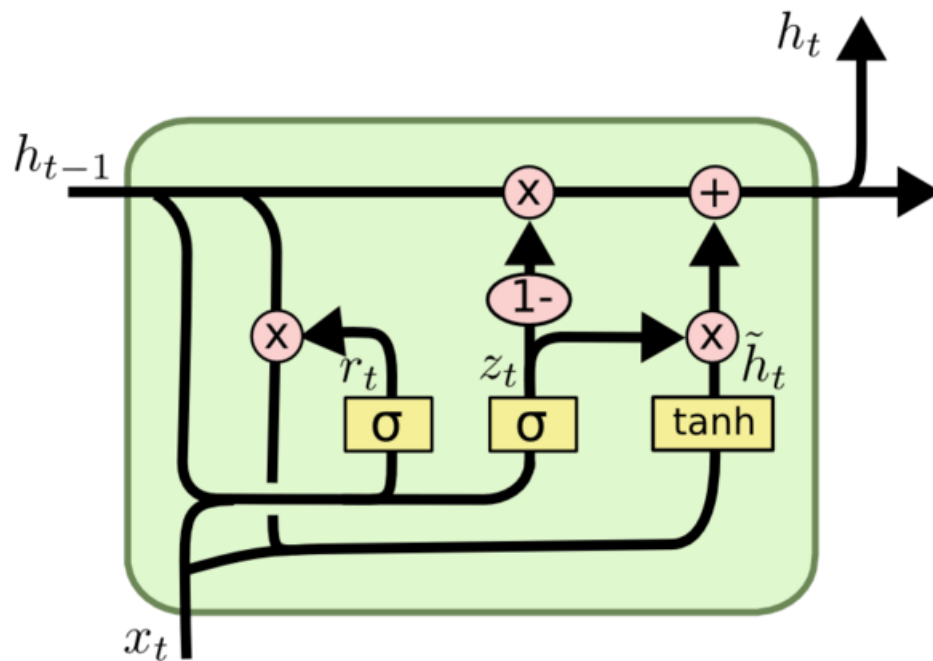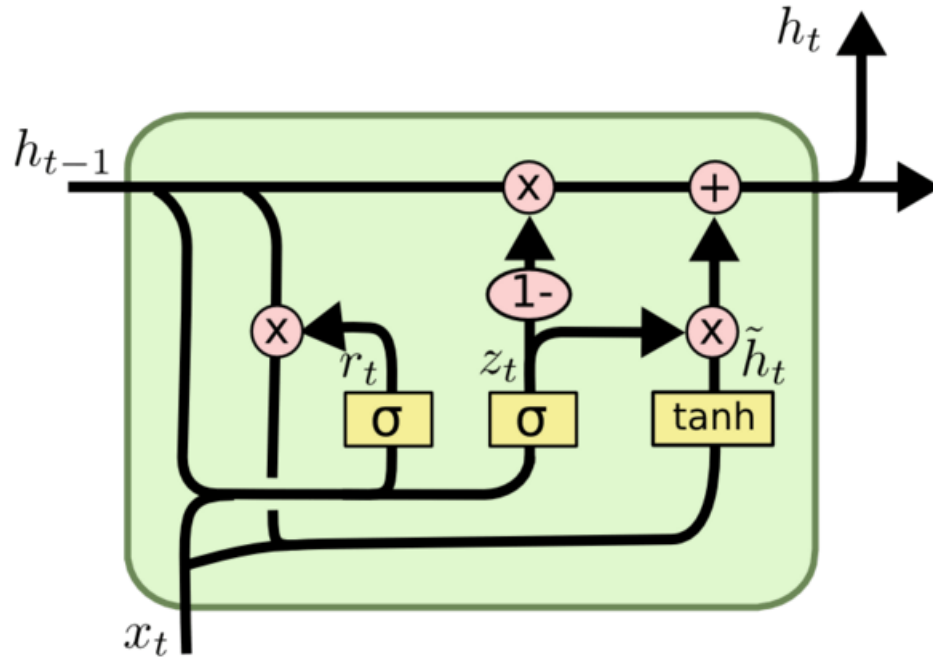
Gated recurrent Unit

GRU

GRU

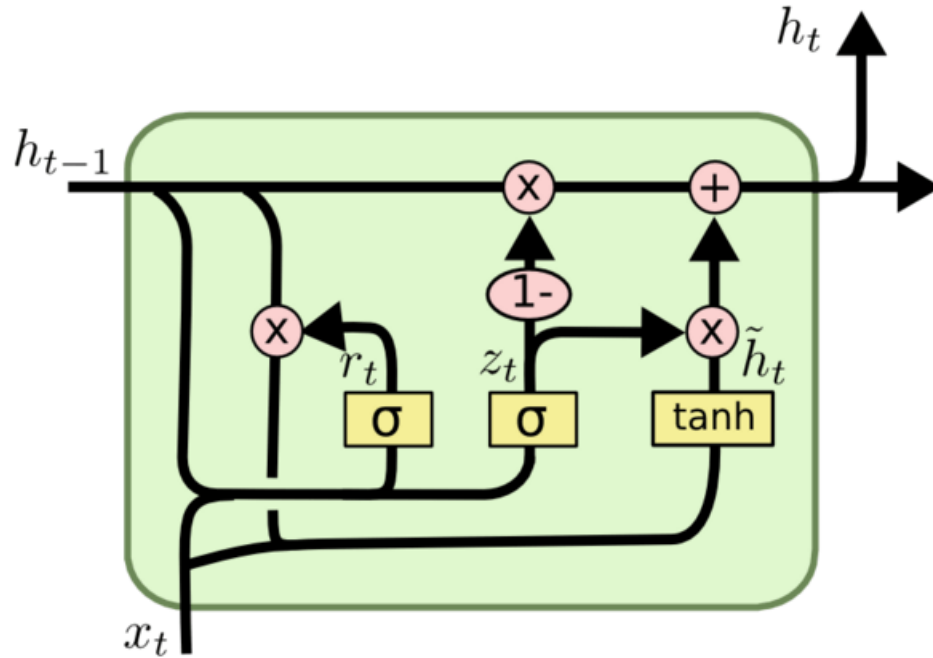$$r_t = \sigma(W_r \cdot [h_{t-1}, x_t] + b_r)$$

GRU

$$r_t = \sigma(W_r \cdot [h_{t-1}, x_t] + b_r)$$

$$\tilde{h}_t = tanh(W_h \cdot [r_t \cdot h_{t-1}, x_t] + b_h)$$

GRU

$$r_t = \sigma(W_r \cdot [h_{t-1}, x_t] + b_r)$$

$$\tilde{h}_t = tanh(W_h \cdot [r_t \cdot h_{t-1}, x_t] + b_h)$$

$$z_t = \sigma(W_z \cdot [h_{t-1}, x_t] + b_z)$$

$$h_t = (1 - z_t) \cdot h_{t-1} + z_t \cdot (\tilde{h}_t)$$