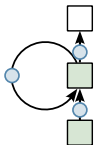
LSTM

Memory Cells

→ Constant Error Carousel
→ Sigmoid Gating
→ Recurrent Inference
→ Recurrent Training

$$c_t = f_t \, c_{t-1} + i_t \, z_t$$

$$h_t = o_t \, \psi(c_t)$$

Memory Cells

sLSTM

+ Exponential Gating
+ New Memory Mixing

mLSTM

+ Exponential Gating
+ Matrix Memory
+ Parallel Training
+ Covariance Update Rule

xLSTM Blocks

xLSTM