

BEFORE

Old Cell State C_{t-1}

[0.9, 0.7, 0.5]

Contains old memory
from previous words

DURING UPDATE

Forget Gate
[0.77, 0.38, 0.20]

Filter old

Input Gate
[0.78, -0.14, 0.60]

Add new



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

AFTER

New Cell State C_t

[0.69, 0.27, 0.10]
+
[0.78, -0.14, 0.60]



[1.47, 0.13, 0.70]

Updated memory
ready for next word