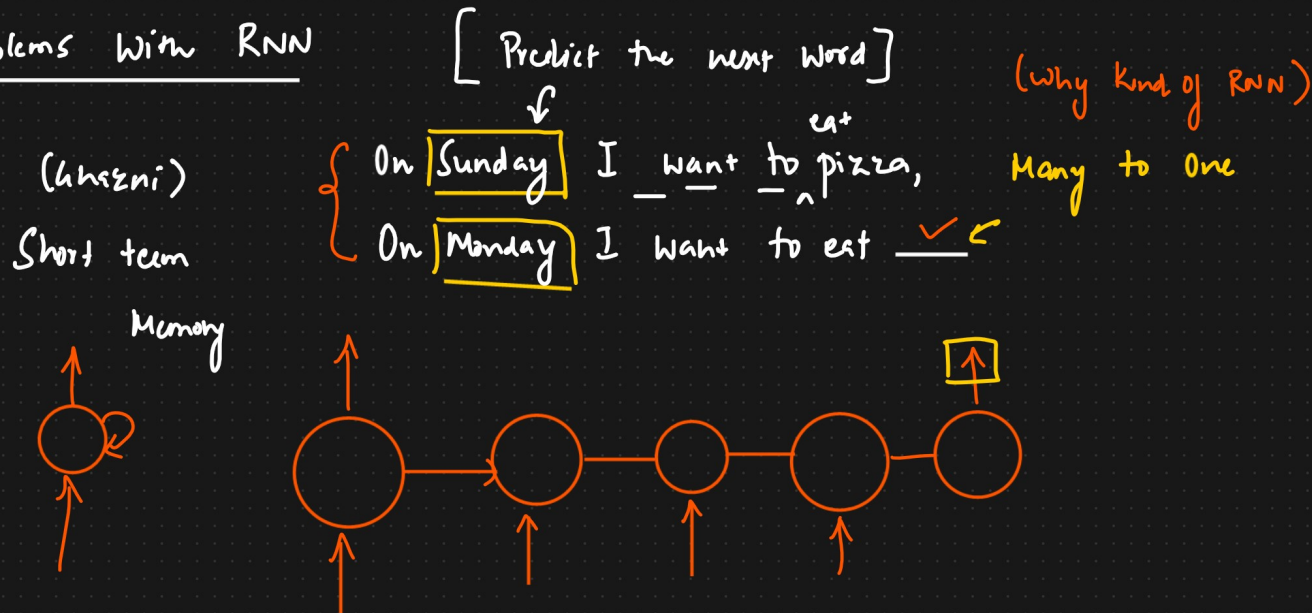


# Day 8 → Natural Language Processing

## Agenda

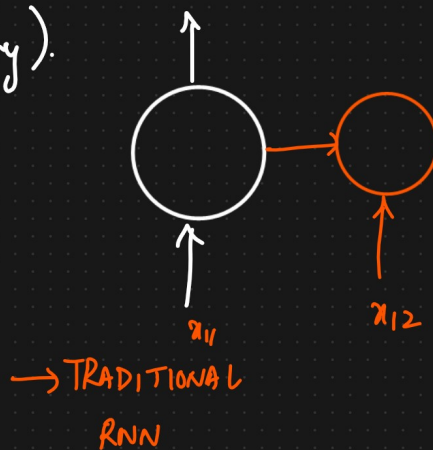
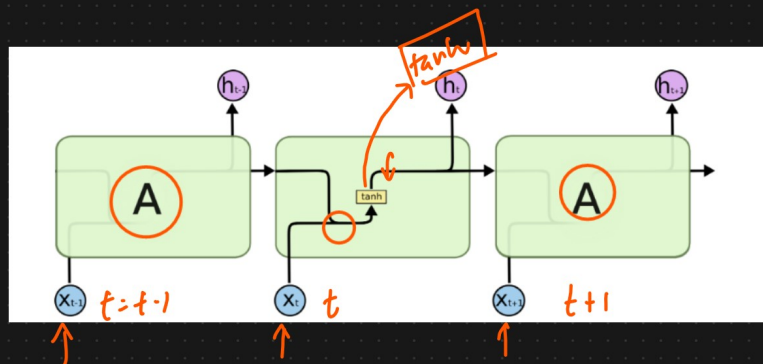
### ① LSTM Recurrent Neural Netw {In-depth Architecture}

#### Problems With RNN



#### LSTM RNN (long short term Memory).

Represent RNN ←



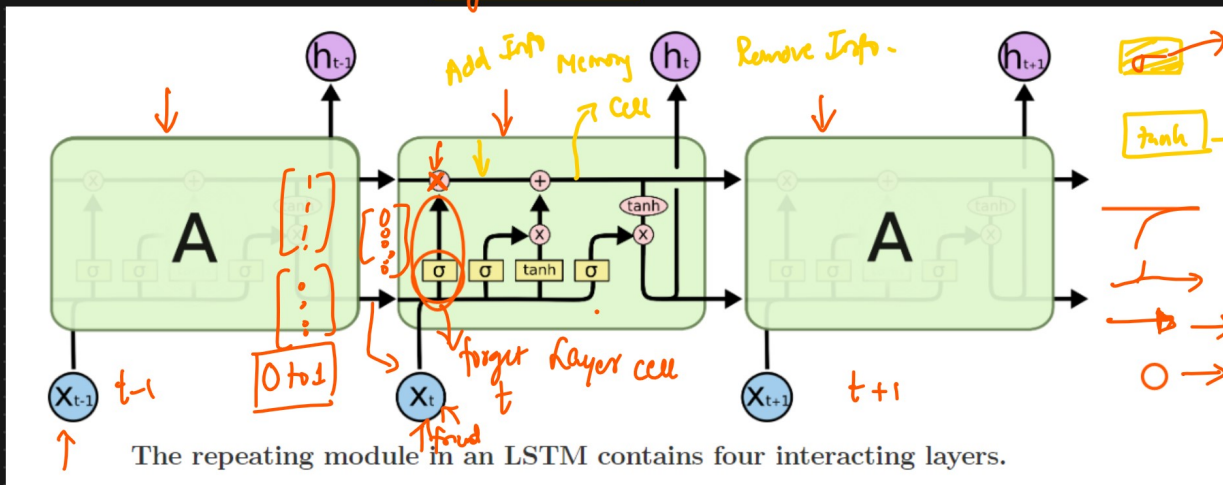
→ KRISH like pizza but my friend like Burger

t=1 t=2  
My name is KRISH and my  
friend name is =

LSTM RNN

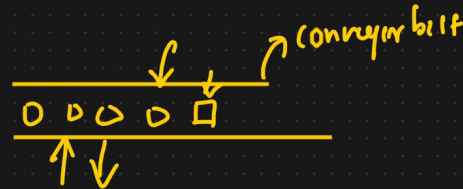
#### ① Long sentences

# Long Short Term (LSTM)



- Neural Net with Sigmoid Activator
- NN with tanh Activation fn.
- Concatenate
- Copy
- vector transfer.
- pointwise operation

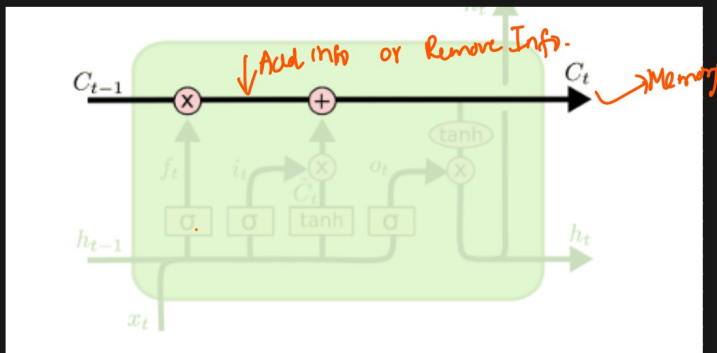
↑ KRISH like pizza but his friend likes burger.  
 forget this info



Memory → ① Add Information  
 ② Remove Information.

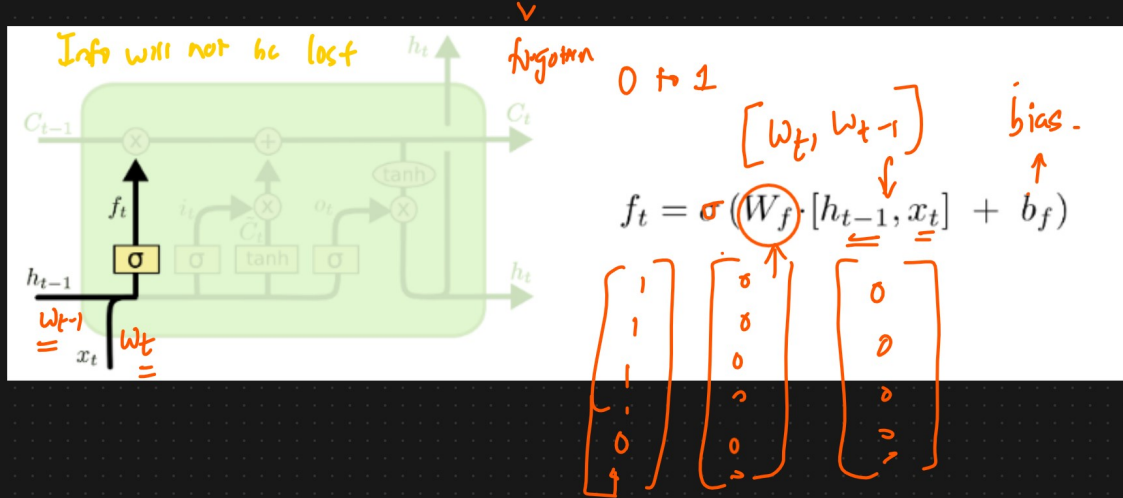
Forget layer cell →

① Memory cell

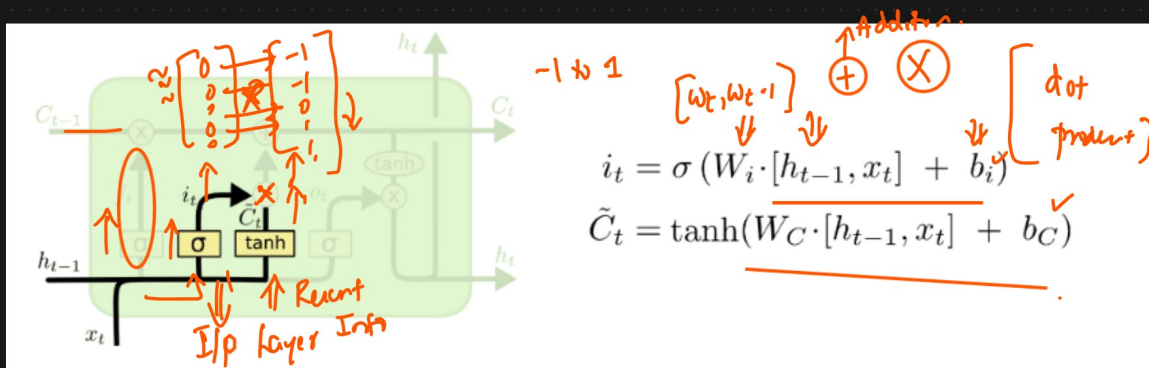


② Forget gate layer

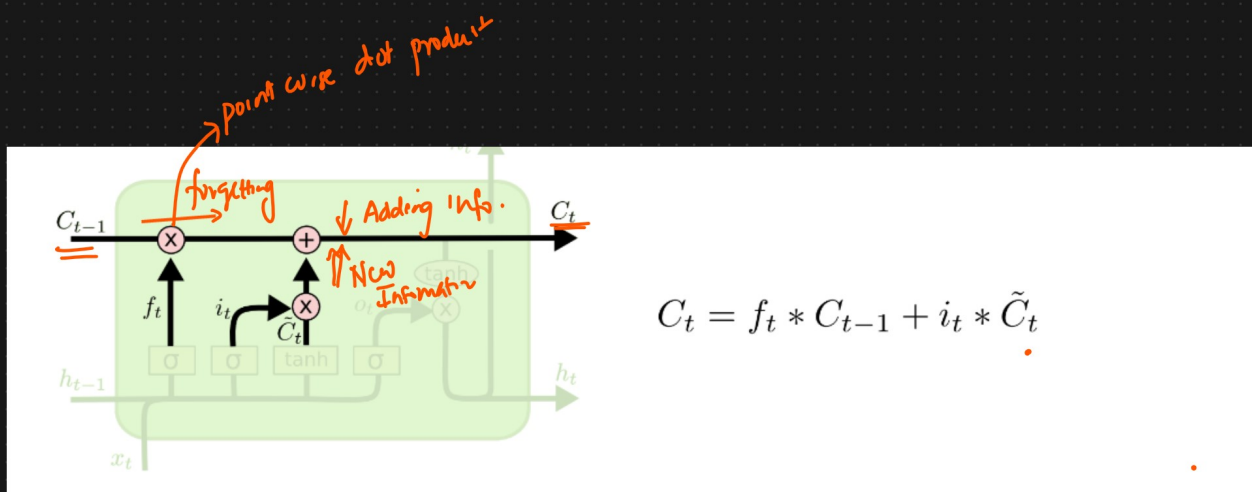
- ① → KRISH like pizza but he doesn't like burger
- ② → KRISH like pizza but his friend like burger



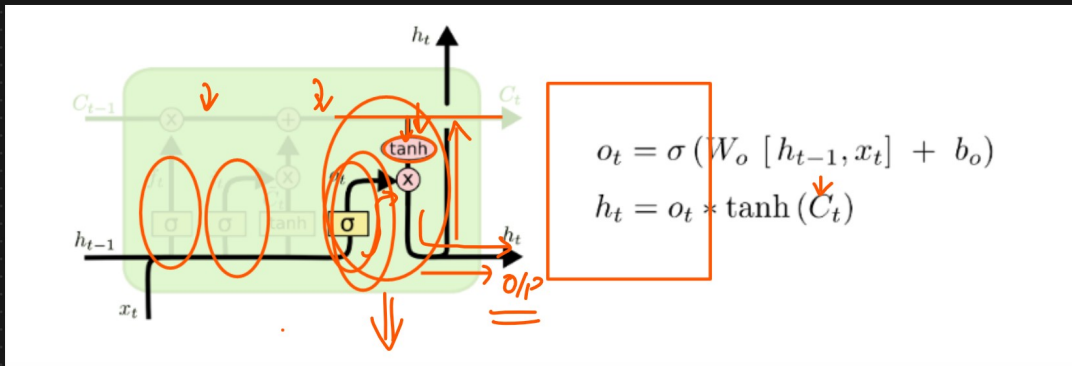
## I/p Gate Layer



②  $\rightarrow$  KRISH like pizza but his friend like burger



## Output Gated Layer



Useless data is remove  
only important data.