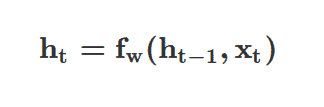
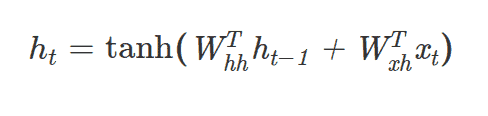
**RNN:**

Uses timestamps t. Like in the formula you use previous h and current input

to calculate next ht.

ht is called cell state. F\_w is given by weights. Same function and

A diagram of a computer

Description automatically generatedparameters every timestamp.

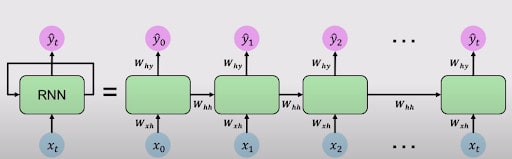
The function for RNNs is given by tanh and the weight matrixes aswell as

An offset by the weight matrix WW\_hh.

The final output is then given by Wty \* ht.

One time through all inputs creates 1 update step where then the weight

matrix is updated.



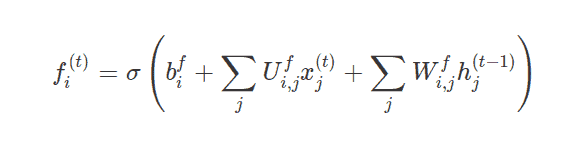
**LSTMs:**

A diagram of a complex flowchart

Description automatically generatedUses Gates. Information added or removed through Gates. A Gate is a neural net layer. Eg. sigmoid. + a multiplication (pointwise).

First Gate (Forget gate)

Takes prior state ht-1 and new input xt.





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Description automatically generated