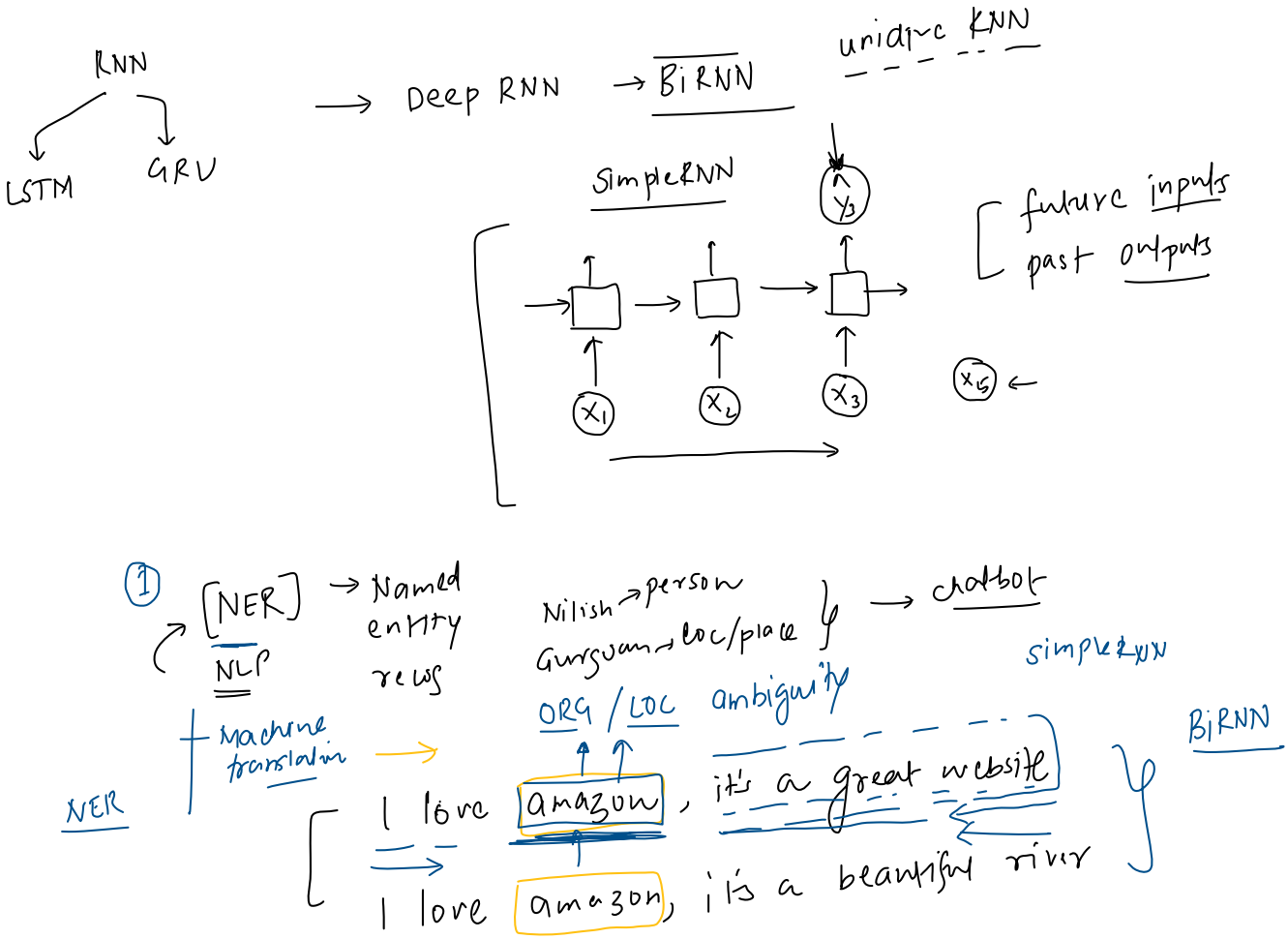
The Why? BiRNN

26 October 2023 15:19



1. It captures the meaning like w.r.t context , for eg : amazon river , amazon website.

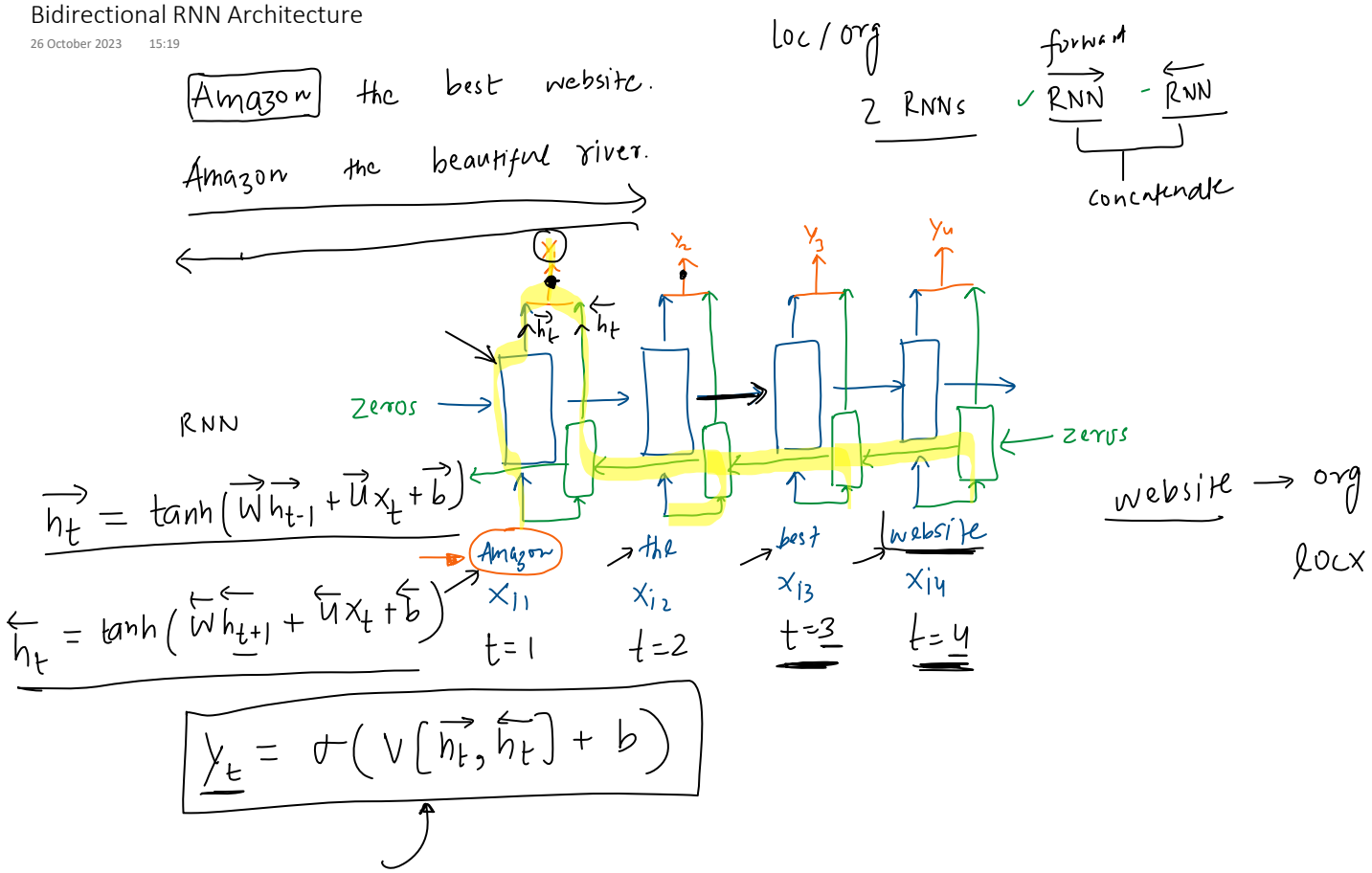
2. BiLSTM solves this problem by traverse from both front and back.

3. But it is like sequential traversal and it increases the complexity as training parameters more.

But LSTM is still a model which have like its infor or data in vectors , though it solves the problem of long dependancy (vanishing graident problem , we face in RNN's) , to a much extent and using BiLSTM also solves the issue of in what context some word is used. But still since there is sequential flow and understanding so there can compuattionally expensive problem for large / complex usecase.

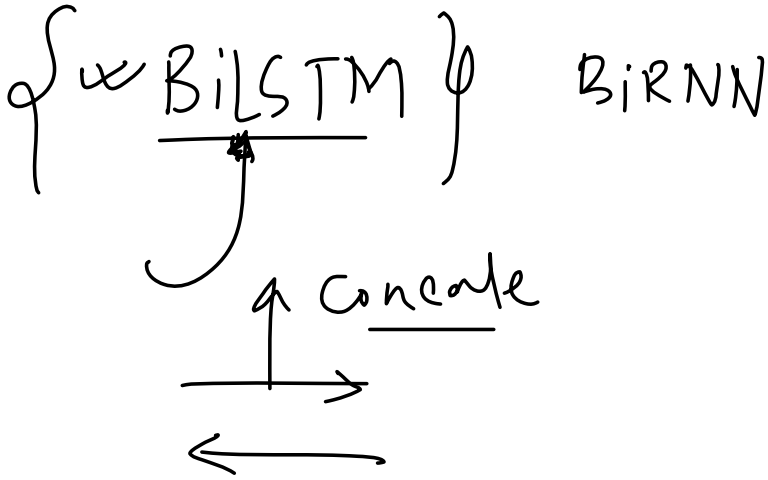
Bidirectional RNN Architecture

26 October 2023 15:19



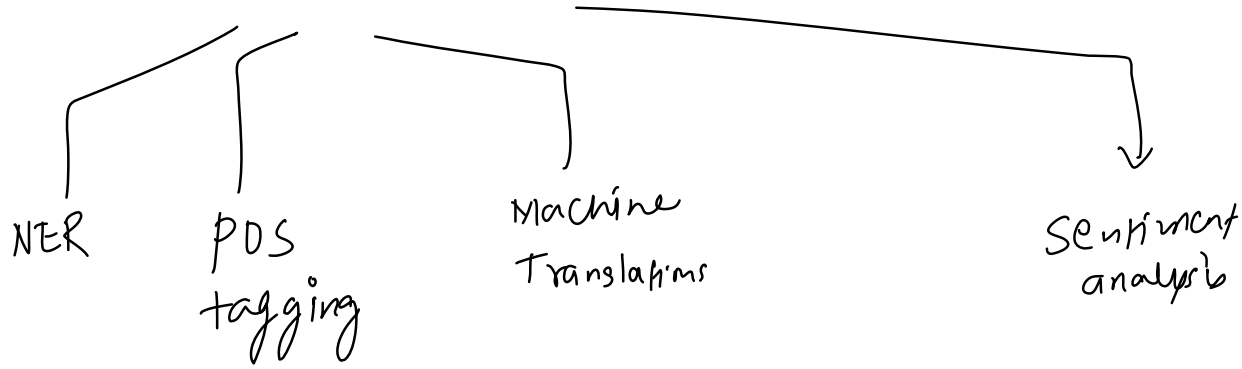
Code

26 October 2023 15:21



Applications and Drawbacks

26 October 2023 15:21



[Time series forecasting]

→ ←

→ Complexity → 190 → 380 double → training → overfitting

→ → ← [Speech recog] → bi rnn

↳ latency → slow