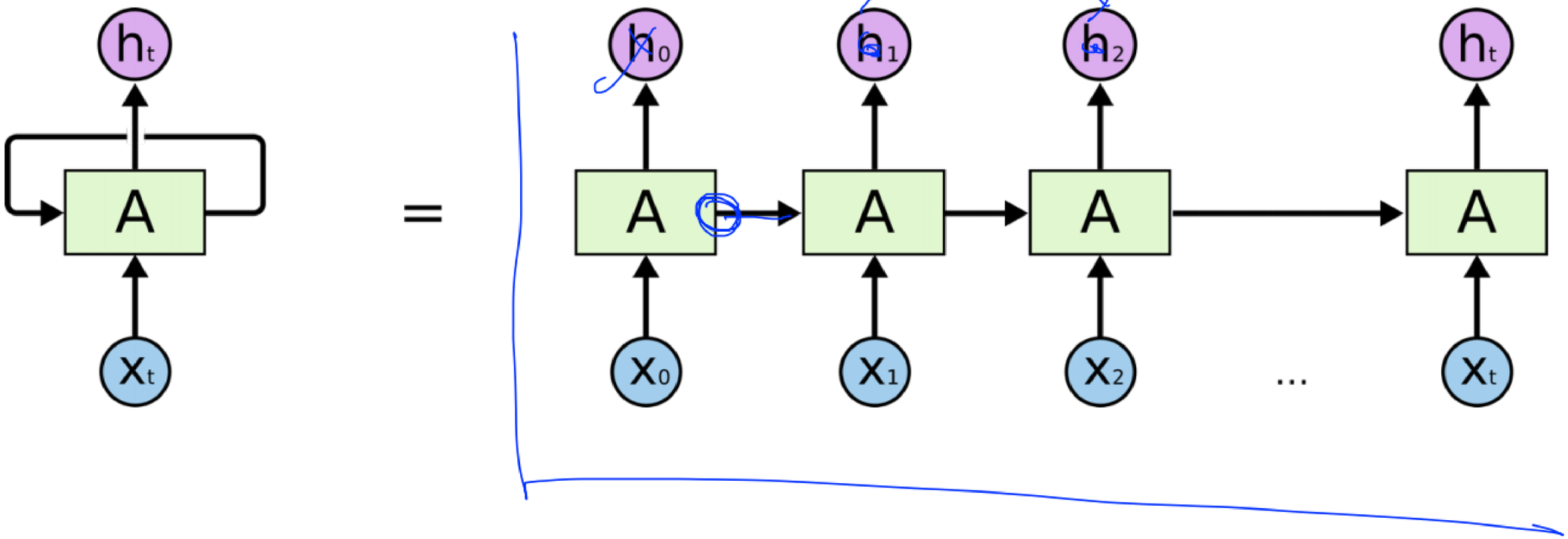
GDSC ML/DL Basic
Week 05
서지현



http://colah.github.io/posts/2015-08-Understanding-LSTMs/

Recurrent Neural Network

We can process a sequence of vectors **x** by applying a recurrence formula at every time step:

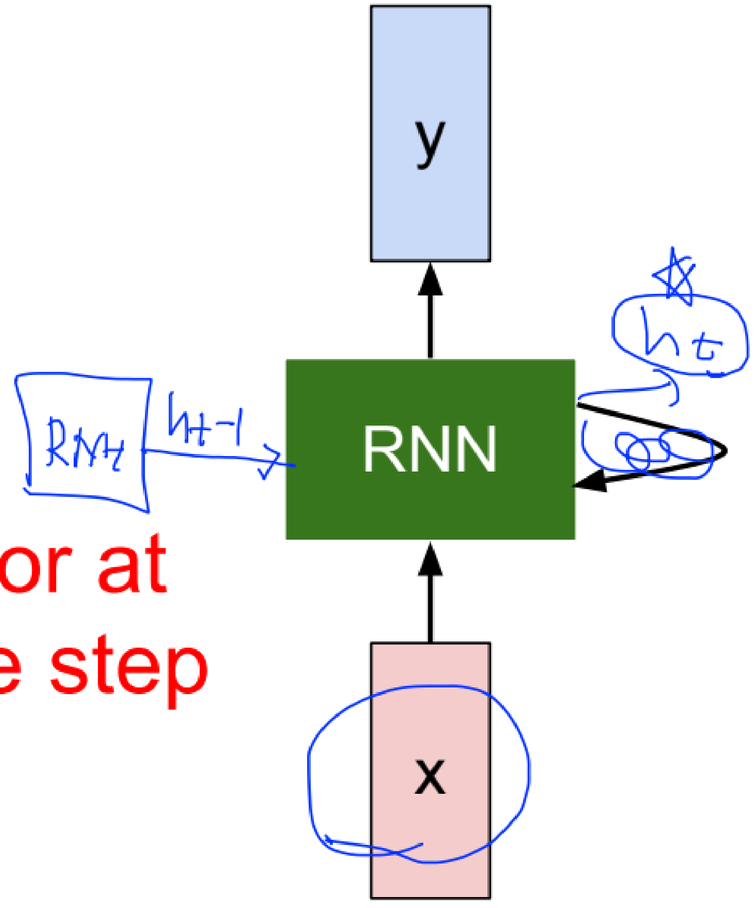
$$h_t = f_W(h_{t-1}, x_t)$$

new state

some function with parameters W

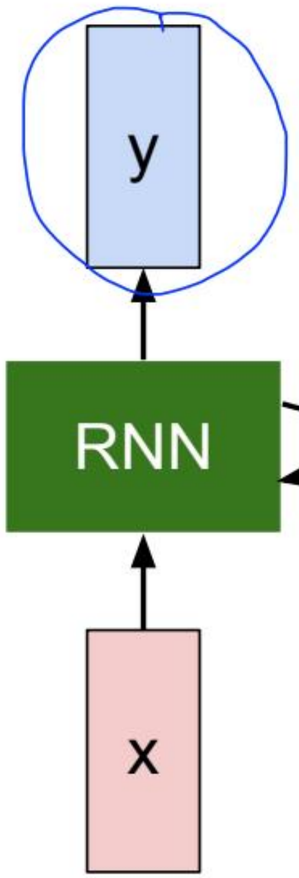
old state

input vector at some time step



(Vanilla) Recurrent Neural Network

The state consists of a single *"hidden"* vector **h**:



$$h_t = f_W(h_{t-1}, x_t)$$

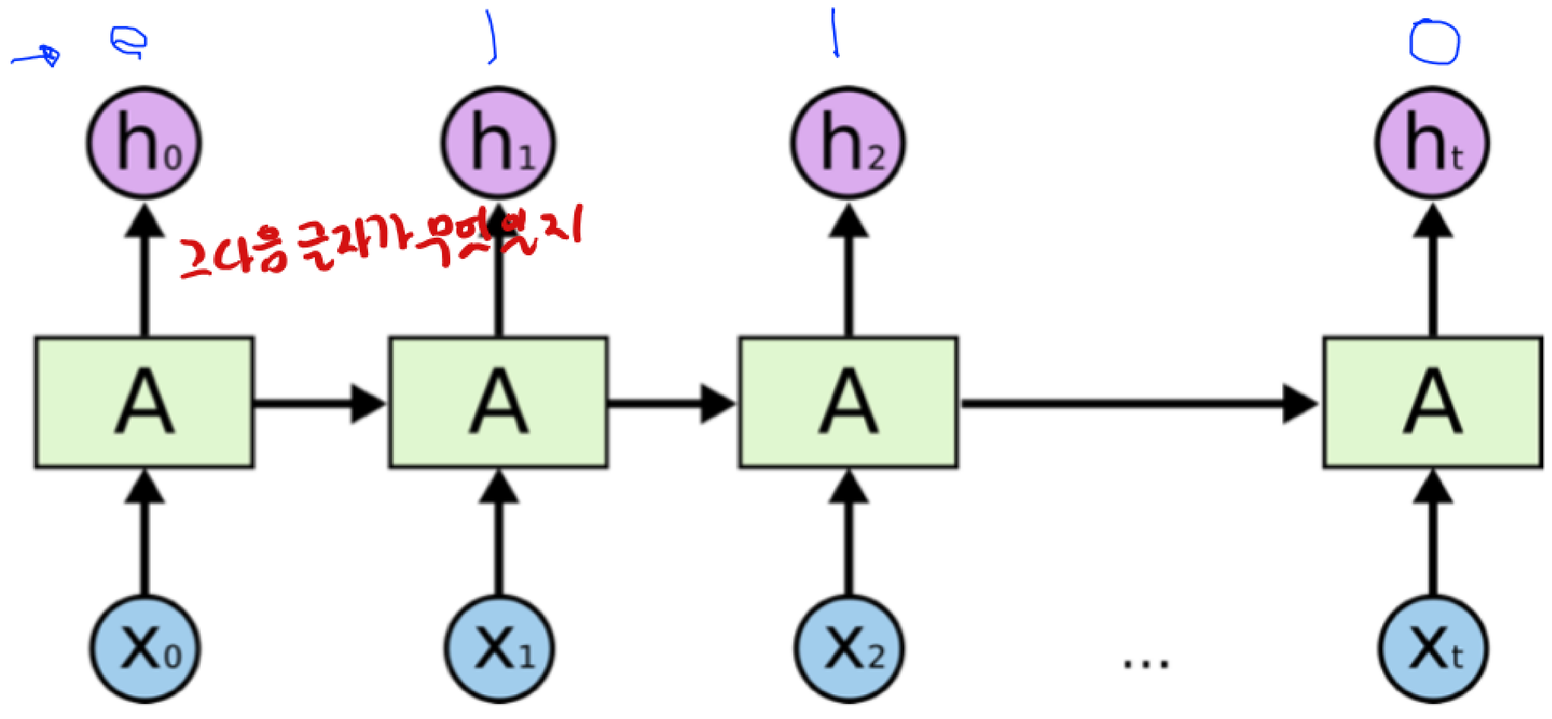
$$h_t = \tanh(W_{hh} h_{t-1} + W_{xh} x_t)$$

$$y_t = W_{hy} h_t$$

Character-level language model example

Vocabulary:
[h,e,l,o]

Example training sequence:
“hello”



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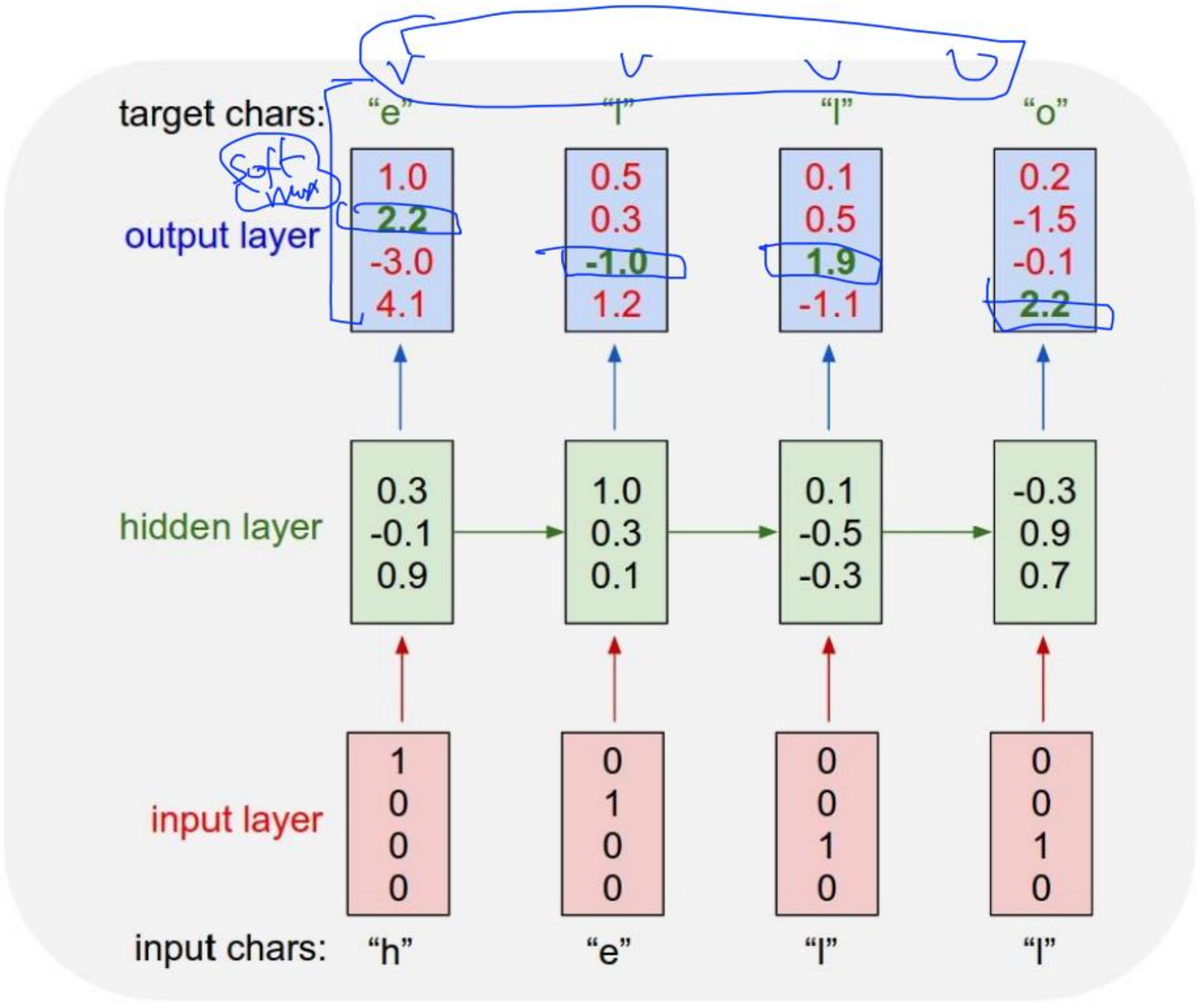
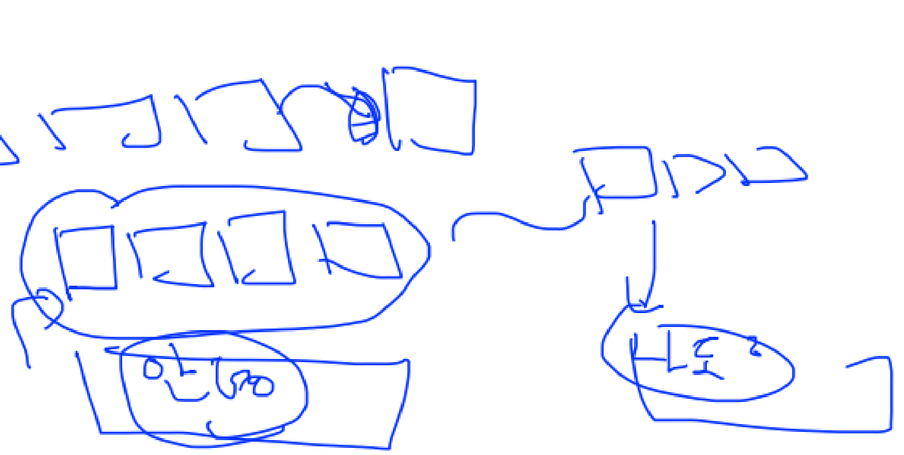


RNN applications

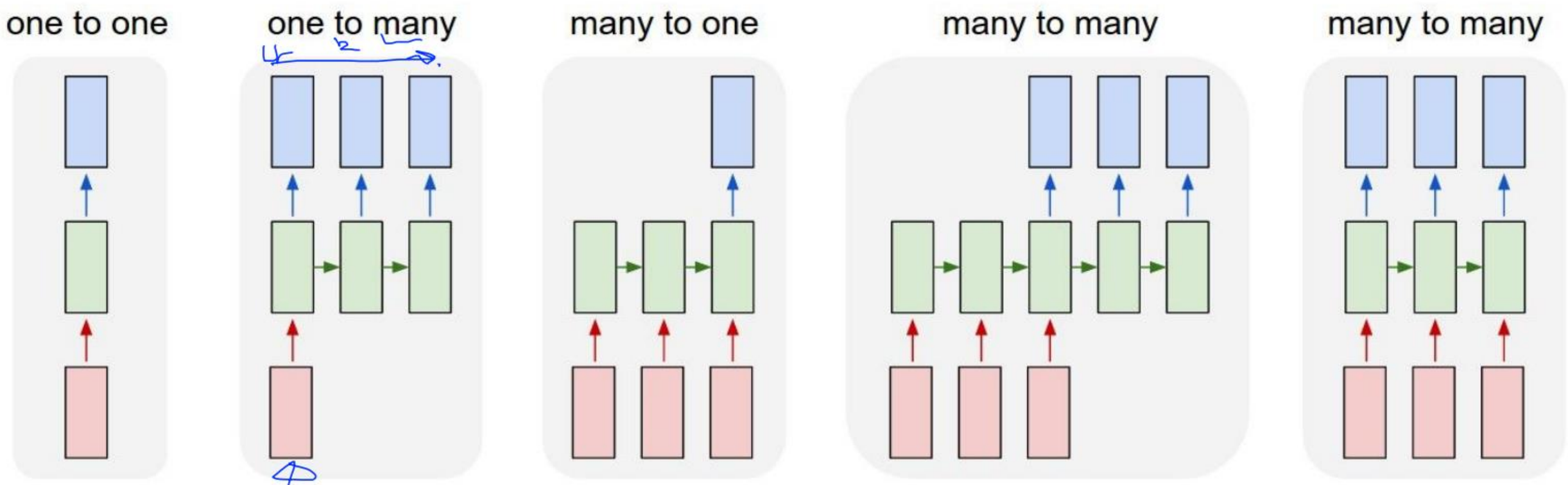
https://github.com/TensorFlowKR/awesome_tensorflow_implementations

- Language Modeling
- Speech Recognition
- Machine Translation
- Conversation Modeling/Question Answering
- Image/Video Captioning
- Image/Music/Dance Generation



http://jiwonkim.org/awesome-rnn/

Recurrent Networks offer a lot of flexibility:



e.g. **Image Captioning**
image -> sequence of words

기온 예측 모델 만들기(Neural Weather Forecaster)

개요	평가기준표	제출	리뷰 결과

리뷰어 지정 전

리뷰 #1 | -

프로젝트 평가 | 코드 리뷰 | 수강생 메모 | 리뷰 목록

리뷰	결과	리뷰일	리뷰어
리뷰 #1 (현재 리뷰)	리뷰어 지정 전	2023.11.01	-