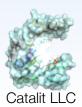


### RECURRENT NEURAL NETS



## CNN PROS/CONS

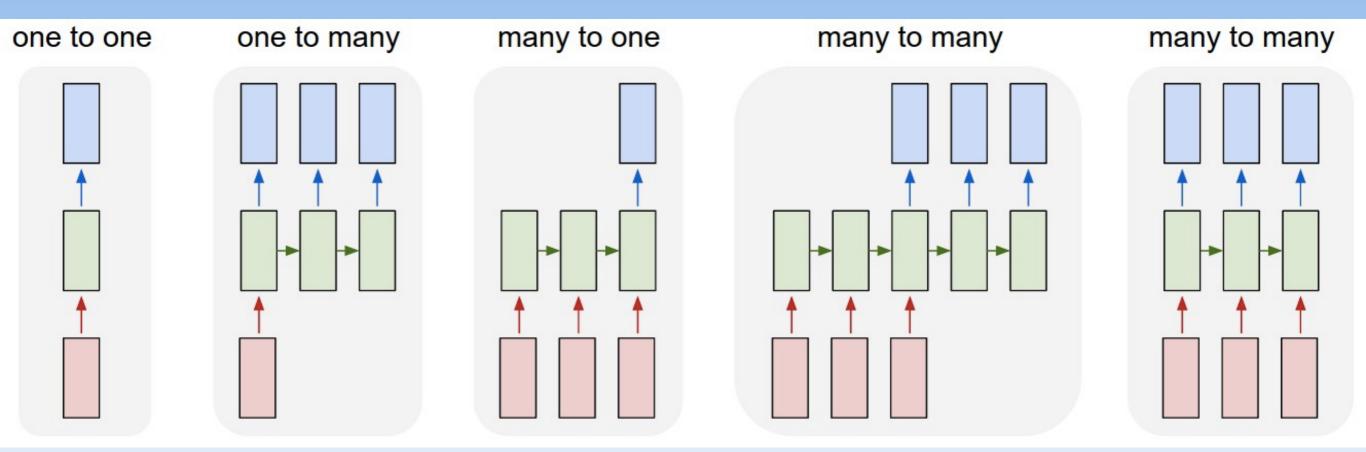


### CNN PROS/CONS

- Pros
  - less parameters than fully connected
  - capture spatial proximity features
  - work well with images
- Cons
  - require fixed size input
  - useless for data without order



# SEQUENCE PROBLEMS



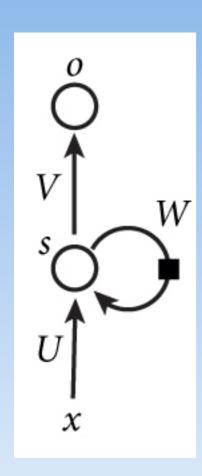


## RNN



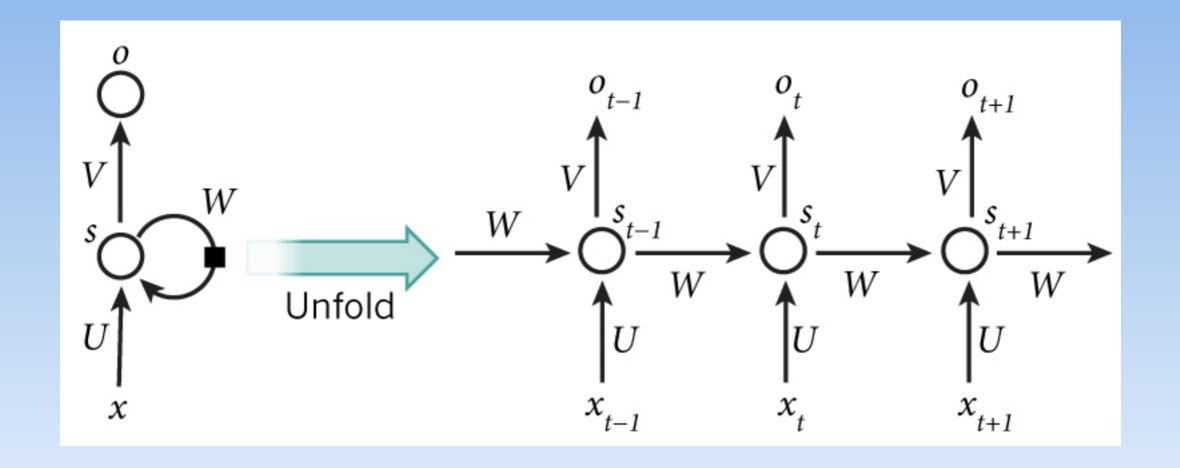


## RNN





#### RNN





#### SENTIMENT ANALYSIS

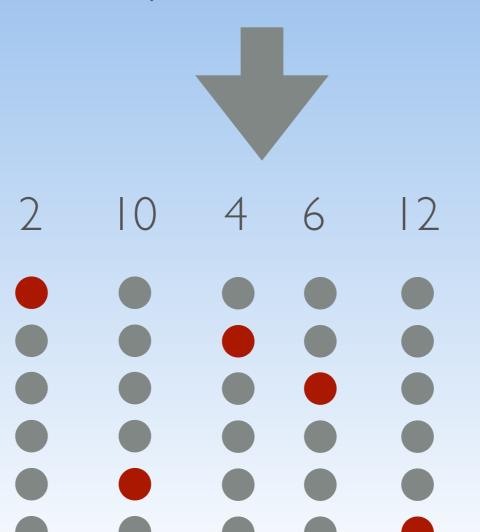


Why can't I use BAG OF WORD approach?



### EMBEDDING

Hello my name is Francesco





# LAB



## SEQUENCE GENERATION

"The surprised in investors weren't going to raise money. I'm not the company with the time there are all interesting quickly, don't have to get off the same programmers. There's a super-angel round fundraising, why do you can do. If you have a different physical investment are become in people who reduced in a startup with the way to argument the acquirer could see them just that you're also the founders will part of users' affords that and an alternation to the idea. [2] Don't work at first member to see the way kids will seem in advance of a bad successful startup. And if you have to act the big company too."

#### PANDARUS:

Alas, I think he shall be come approached and the day When little srain would be attain'd into being never fed, And who is but a chain and subjects of his death, I should not sleep.

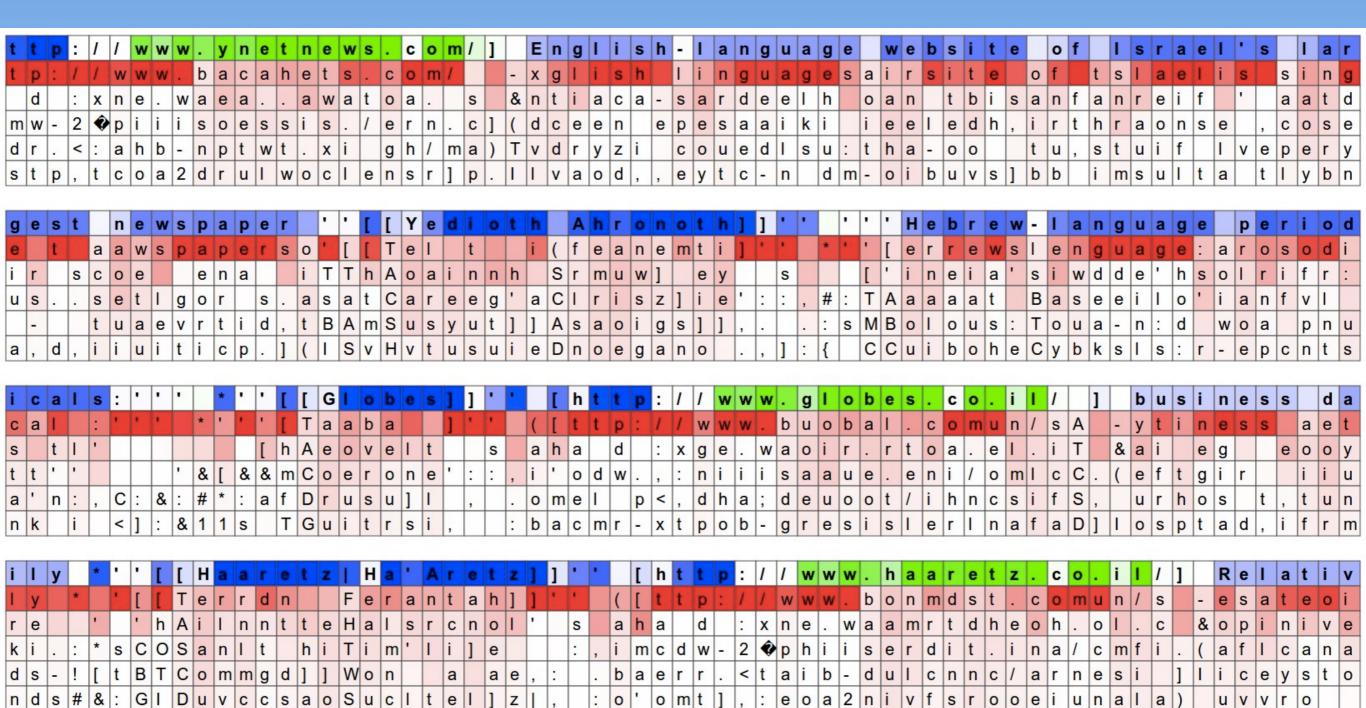
#### Second Senator:

They are away this miseries, produced upon my soul, Breaking and strongly should be buried, when I perish The earth and thoughts of many states.

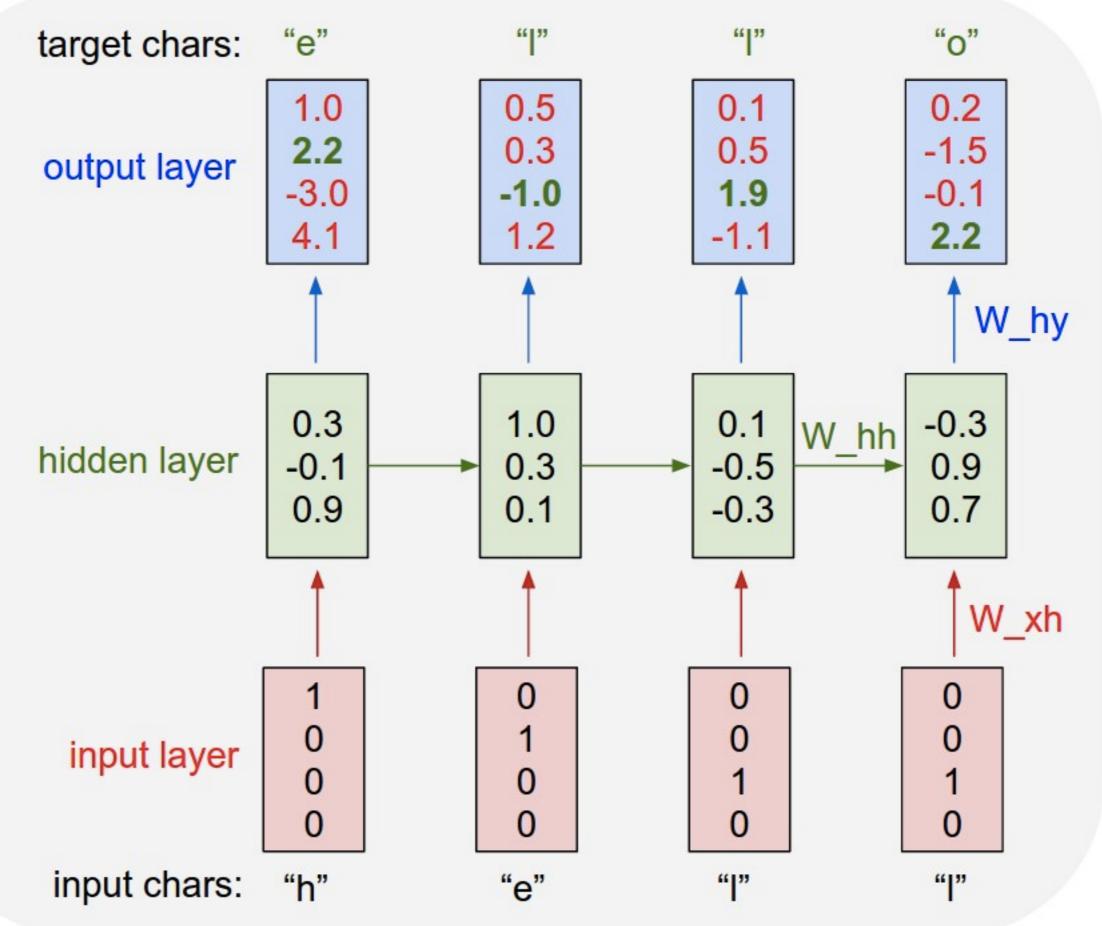


```
* Increment the size file of the new incorrect UI FILTER group information
 * of the size generatively.
static int indicate policy(void)
  int error;
  if (fd == MARN EPT) {
     * The kernel blank will coeld it to userspace.
    if (ss->segment < mem_total)</pre>
      unblock graph and set blocked();
    else
      ret = 1;
    goto bail;
  segaddr = in_SB(in.addr);
  selector = seg / 16;
  setup works = true;
  for (i = 0; i < blocks; i++) {</pre>
    seq = buf[i++];
   bpf = bd->bd.next + i * search;
    if (fd) {
      current = blocked;
    }
  rw->name = "Getjbbregs";
  bprm_self_clearl(&iv->version);
  regs->new = blocks[(BPF_STATS << info->historidac)] | PFMR_CLOBATHINC SECONDS << 12;
  return segtable;
                       http://karpathy.github.io/2015/05/21/rnn-effectiveness/
```











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