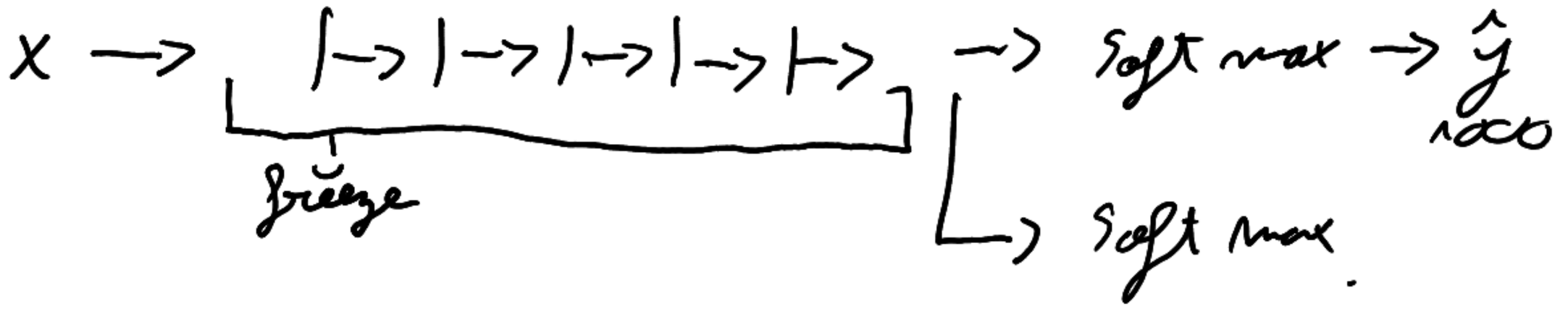
+ Using Open-Source Implementation:

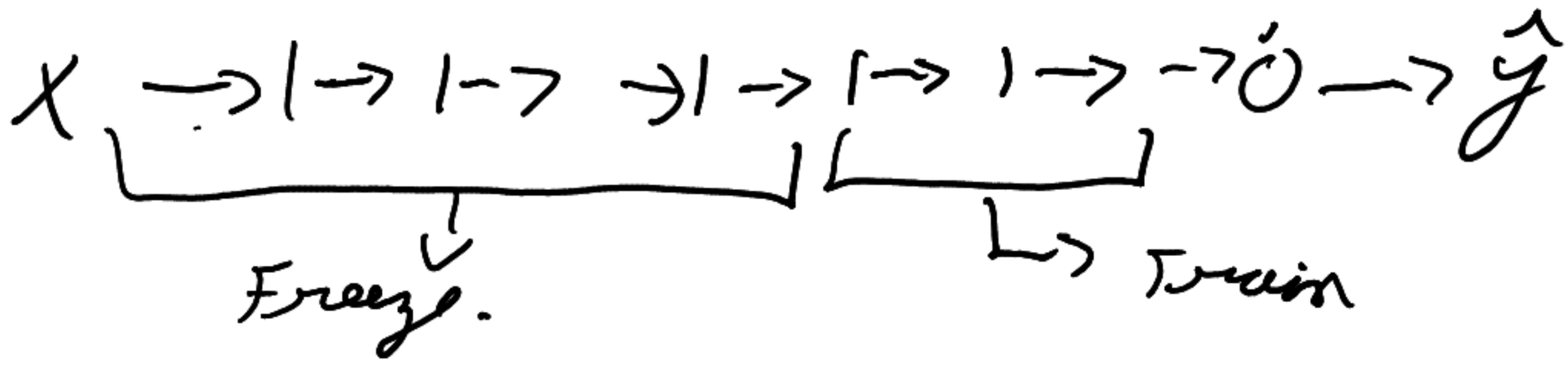
- Many NN are difficult to replicate
- So you can search and download the code

+ Transfer Learning

- Training can be expensive, usually you can download the weights.



We would freeze all the previous layers and train the softmax one.



+ Data Augmentation.

- Usually more data will help, specially in computer vision.

+ Mirroring on the vertical axis.
+ Random cropping.
+ Rotation / Shearing / Local Warping.
+ Color shifting
+ Advanced methods for color destortion
  ↳ PCA => Principal Component Analysis

+ State of Computer Vision

Little Data (More hand engeniring) —Object detection, Speech recognition, Image recognition→ Lots of Data (Less engenering)

+ Tips for doing well on Benchmarks / Winning competitions:

- Ensembling
  ↳ Train several networks independtly and average the outputs.
- Multi crop at Test Time.
  ↳ Run classifier on multiple versions of test images and average the results.