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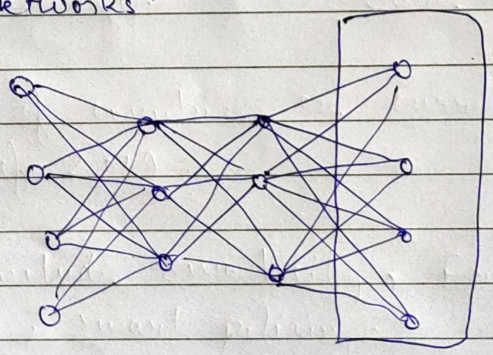
18-10-2025

Computer Vision -

- MNIST
- Imagenet
  14,197,122 images, 21841 synsets indexed
  1000 images to illustrate each synset
  Quality controlled and Harman annotated
- Flicker dataset and Microsoft COCO dataset
- Along with image recognition and classification the text description is also there as option of image Used for NLP
- VQA dataset - Virtual Question Answering

* Neural Networks -



fully connected layers
Outputs are signals

Discrete O/P - Softmax layer in O/P layers

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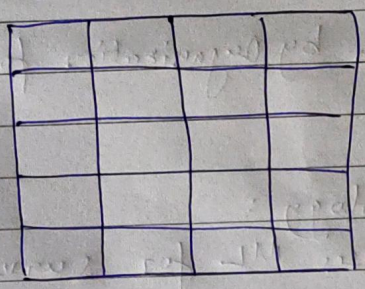
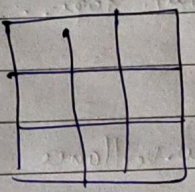
Deep learning -

Input → Conv. + Relu + Pooling → Conv + Relu + Pooling - - → flatten → softmax

1 layer of Conv + Relu & pooling is 1 degree of different



Image



filter

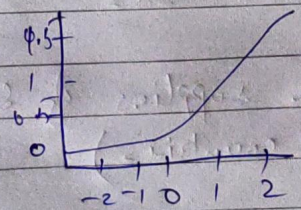
Pooling layer

2	2	7	3
9	4	6	1
8	5	2	4
3	1	2	6

max pool 2x2 →

9	7
8	6

Relu (Rectified Linear Unit)



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Use cases:
Real time Object detection
Image segmentation

22-10-25

The Global Expansion of AI Surveillance - is a white paper.
(White Paper: Written by Organization for Organization)

AI Surveillance technology:
Tech that uses ML for surveillance

- FRT is 1 of the AI Surv. tech
- 3/4th of countries are currently using AI for surv. as of 2019.
- This includes smart city, facial recognition systems, smart policing.
- China is the major driver of AI surveillance. Huawei, Dahua, ZTE - supply AI surveillance technology in 63 countries, 36 of which signed onto China BRI
- Next non-chinese supplies of surveillance is NEC Japan (14 countries)