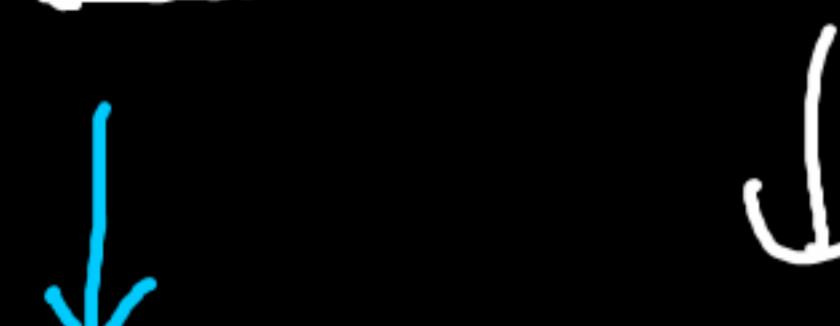


CNN, ConvNet → Convolutional Neural Network



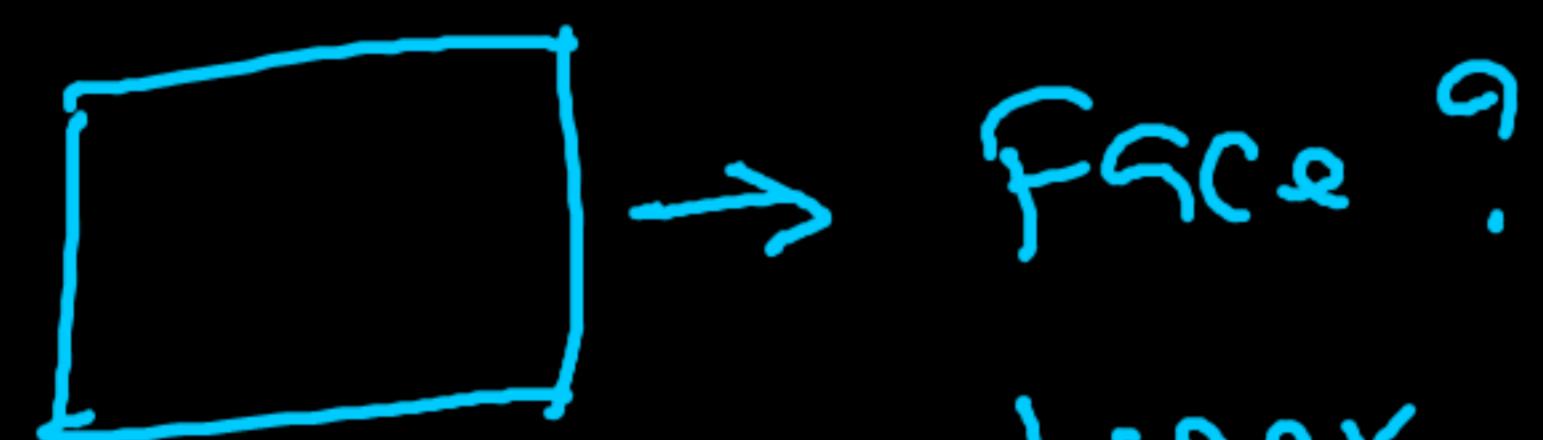
(2D) Special kind of NN → Grid-like topology



Biological Inspiration → Visual system

MLP - ReLU | Adam

1D

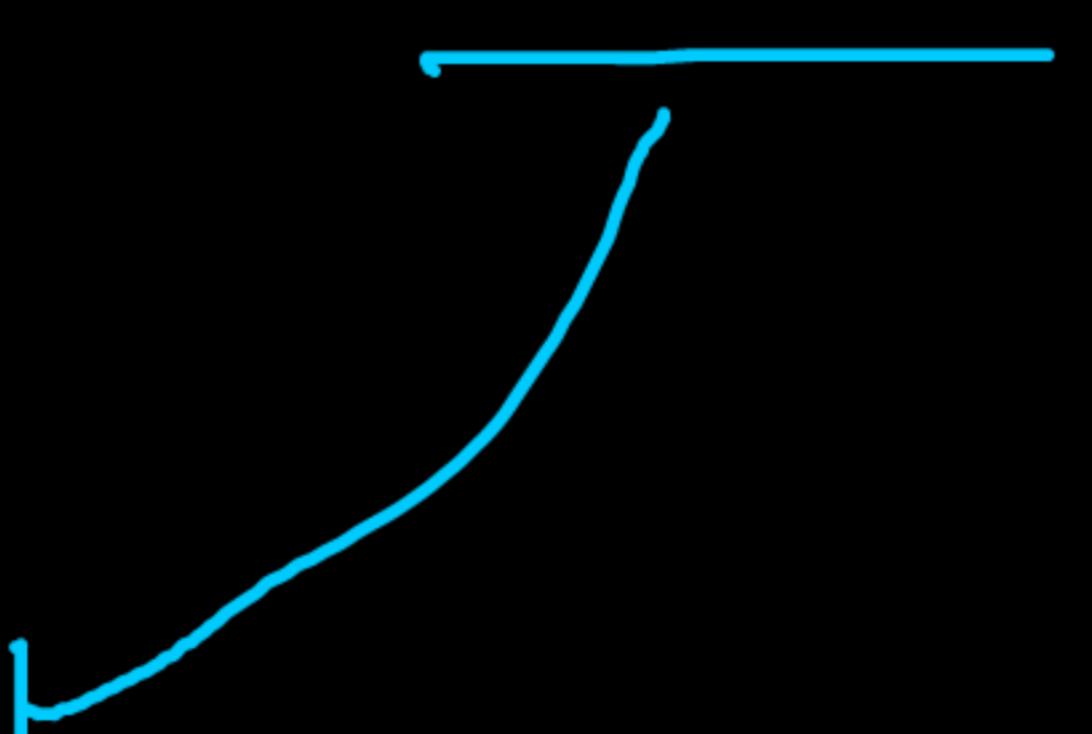


Face?

tiger

cat

human



Object recognition

50 years - computer vision

ML/AI

2024

Image | videos

DL CV2

2012

Sourav K to Hosts and panelists

SK yes sir

Usha Kumari to Hosts and panelists

UK 45

Santoshkumar Pa... to Hosts and panelists

SP 45

Madhavan to Hosts and panelists

M yes sir

Urmil Shah to Hosts and panelists

US Here

PRAMOD K. to Hosts and panelists

PK yes

Priyanka to Hosts and panelists

P not able to hear you sir

Usha Kumari to Hosts and panelists

UK sir, not audible

now ok audible

Urmil Shah to Hosts and panelists

US yes sir

Ravinder to Hosts and panelists

R yes

Priyanka to Hosts and panelists

P Yess

Who can see your messages? Recording on

To: Hosts and panelists

...

Type message here...

→ 1981 - Nobel prize winner - Medicine
Hubel & Wiesel

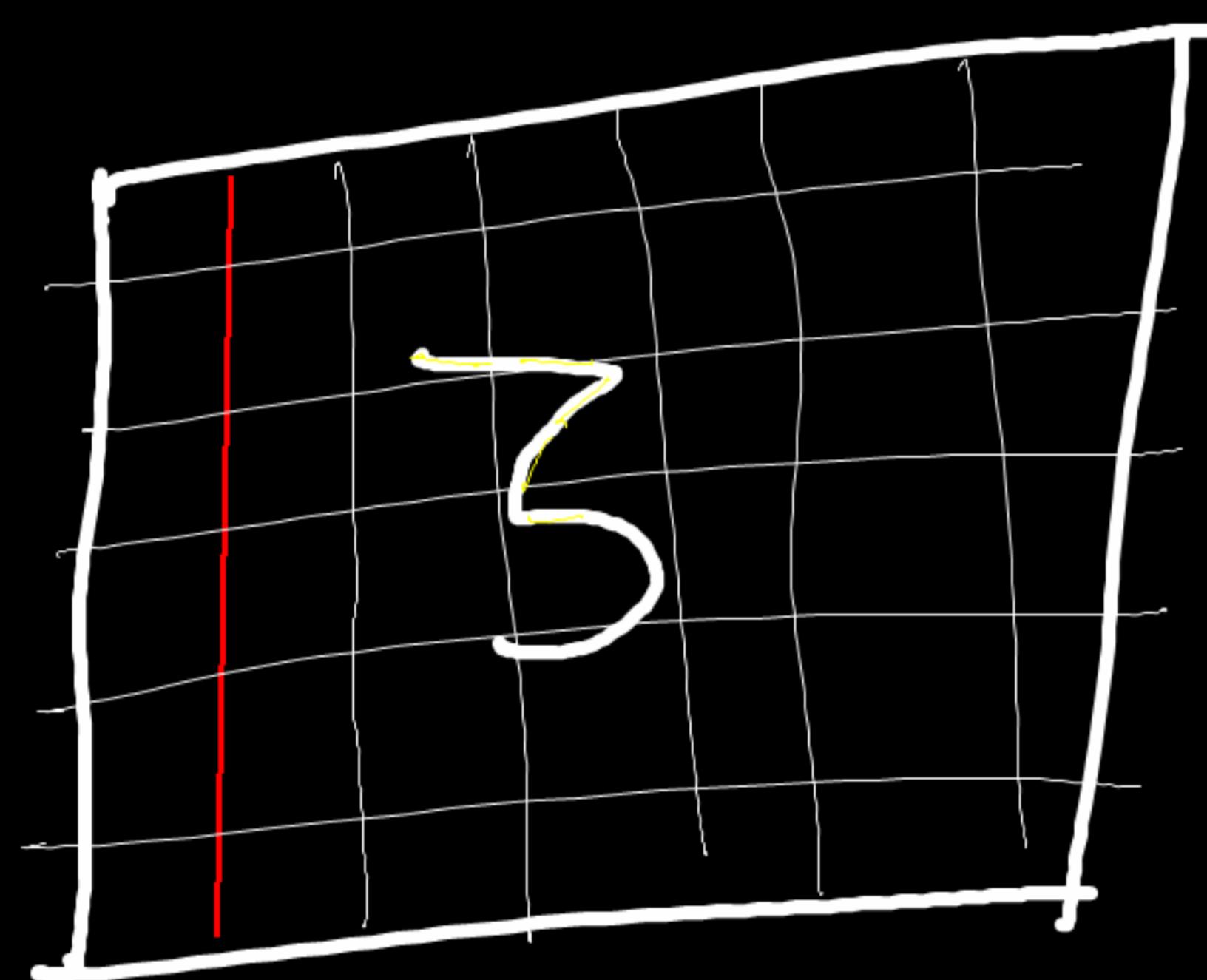
- ↳ 50's 60's 70's 80's
- ↳ monkey, cat, dog, human, Ant
 → visual cortex
- cat → Neuron also fires
- micro electrodes



- Key findings
- ① Some neurons in the visual cortex that fired when presented line at specific angles.
 - ② V1 - primary visual cortex
 ↳ edge detection, motion, depth, color, shape, faces ...
 - ③ Hierarchical structure

Simple cell → Smaller receptive field

complex cell → bigger " "

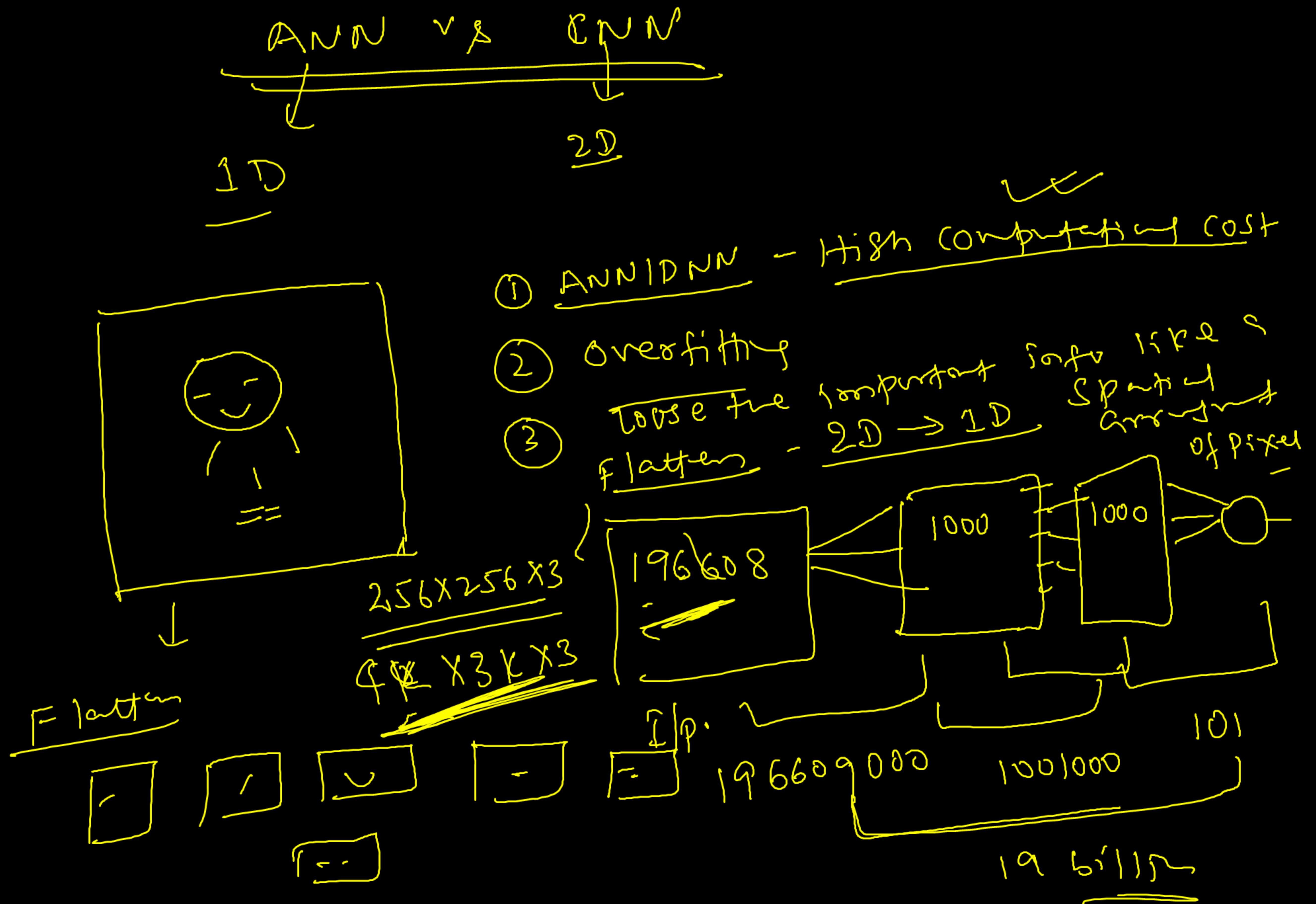


→ Loss of information
↓
AI / CV / Dense / CNN



→ Leverage Street
Deploy in - USD 400

→ Inspired by
biology



- Priyanka to Hosts and panelists
P Yess
- Santoshkumar Pa... to Hosts and panelists
SP no
- Rohan to Hosts and panelists
R no
- Me to Everyone
LP <https://www.youtube.com/watch?v=QsikPDDxy4g>
- Usha Kumari to Hosts and panelists
UK looks like wall nut
- Gunanidhi Moha... to Hosts and panelists
GM dimension
- Rohan to Hosts and panelists
R cnn - 2d
- abhishek to Hosts and panelists
A cnn layer
- R filters
- Rohan to Hosts and panelists
R Ann - 1D
- Rohan to Hosts and panelists
R Yes
- Usha Kumari to Hosts and panelists
UK yes
- Who can see your messages? Recording on
- To: Everyone
- Type message here...

Screen sharing

You are screen sharing Stop share

Participants 19 Chat Share Pause Annotate Show webinar More yes

PRAMOD K. to Hosts and panelists ok

Gunanidhi Moha... to Hosts and panelists yes would be better

Madhavan to Hosts and panelists coming week sir

PRAMOD K. to Hosts and panelists next session

Rohan to Hosts and panelists Commin week

Usha Kumari to Hosts and panelists ok sir

Madhavan to Hosts and panelists yes

Rohan to Hosts and panelists Fine Sir

Gunanidhi Moha... to Hosts and panelists yes

PRAMOD K. to Hosts and panelists yes

Madhavan to Hosts and panelists Thanks a lot sir

Who can see your messages? Recording on

To: Everyone

Type message here...

The diagram illustrates a neural network architecture. It starts with an input layer labeled "Data Augmentation". This leads to a "Conv Net" section, which contains a "Conv Layer" (represented by a circle), a "ReLU Layer" (represented by a circle), and a "Pooling Layer" (represented by a circle). The "Pooling Layer" is associated with a "Global F" label. Above the "Conv Net" is a "Padding" layer and a "Stride" layer. The output of the "Conv Net" is labeled "Feature Map". From the "Feature Map", arrows point to two paths: "Transfer Learning" and "most".

Popular NN

→ LeNet
→ AlexNet
→ VGG 16 / 19 → most
→ ResNet
→ Xception

Transfer Learning