

# DL Assignment: 02

I. Conv 2D Layers:  $\rightarrow 1792$

$$\underbrace{(3+3)}_{\text{kernel}} \times \underbrace{64}_{\text{filter}} + \underbrace{3}_{\text{channel}} + \underbrace{64}_{\text{Back-propagation}}$$

II. Conv 2D Layer 2:  $\rightarrow 18464$

$$\underbrace{(3+3)}_{\text{kernel}} \times \underbrace{32}_{\text{filter}} + \underbrace{64}_{\substack{\text{filter} \\ \text{from} \\ \text{previous} \\ \text{channel}}} + \underbrace{32}_{\text{backprop}}$$

III Dense Layer - I:  $\rightarrow 1049088$

$$\underbrace{(512)}_{\text{neuron}} \times \underbrace{2048}_{\text{output}} + \underbrace{512}_{\text{Back propagation}}$$

in the  
layer

from  
flatter  
layer

IV. Dense Layers 2  $\rightarrow$  65664

$(128 \times 512)$   
neurons o/p  
from  
previous  
layer

+128  
back propagation

V. Dense Layer 3  $\rightarrow$  8256

$(64 \times 128)$   
neurons o/p  
from  
pre dense  
layer

+64  
back  
prop.

VI. Dense Layer 4  $\rightarrow 2080$

$$(32 \times 64) + 32$$

neurons  $\downarrow$  o/p from prev.  $\downarrow$  back prop.

VII. Dense Layer 5  
(output layer)  $\rightarrow 330$

$$(\underline{10} + \underline{32}) + 10$$

no. of o/p neurons  $\downarrow$  o/p from prev. layer  $\downarrow$  back prop

Total trainable

Para : = 1,145, 674.

