CSE428: Image Processing

Quiz 3 (Fall 2023)
Marks: 15
Time: 20 minutes

Question

(a) Consider a different convolutional neural network defined by the layers in the left column of the table below. Fill in the shape of the output volume and the number of parameters at each layer. **[10]**

Here,

- *CONV5-N* denotes a convolutional layer with *N* filters with height and width equal to *5*. Padding is *2*, and stride is *1*.
- *POOL2* denotes a *2×2* max-pooling layer with a stride of *2* and *0* padding.

Layer	Activation Volume Dimensions	Number of parameters
Input	*32×32×3*	*0*
CONV5-10		
POOL2		
CONV5-10		
POOL2		

(b) Define receptive field of a convolutional neural network. Explain how receptive field changes within a convolutional neural network. **[2+3]**

Submission link: https://forms.gle/Lk6Vgv3JW6YLvXDf8