

# CSE-5368 Neural Networks

## Fall 2022 Quiz 06

Time: 12 Minutes

1. Consider a convolutional neural network.

Note: **Do NOT consider Biases.**

### Input layer:

Input to this CNN are color images of size **128x128x3** with the batch size = **96**

### Next layer is Conv2D layer:

number of filters: **60**, filter size: **7x7** ; stride: **3x3** ; padding: **4x4**

What is the shape of the weight matrix for this layer? \_\_\_\_\_

What is the shape of the output (tensor) of this layer? \_\_\_\_\_

### Next layer is Conv2D layer:

number of filters: **32**, filter size: **3x3** ; stride: **5x5** ; padding: **2x2**

What is the shape of the weight matrix for this layer? \_\_\_\_\_

What is the shape of the output (tensor) of this layer? \_\_\_\_\_

### Next layer is Flatten layer:

What is the shape of the output (tensor) for this layer? \_\_\_\_\_

### Next layer is Dense layer:

number of nodes: **100**

What is the shape of the weight matrix (tensor) for this layer? \_\_\_\_\_

What is the shape of the output (tensor) for this layer? \_\_\_\_\_