Review Questions - Week 13 Group

# Instructions

Each group member needs to create 2 multiple choice questions for your groups designated weekly material. Make sure they are labeled with your name.

Ensure you follow the question writing rules:

1. Focus your question on one main concept that needs to be assessed
2. Be as explicit and complete in your wording as possible but not lengthy when writing the stem (question portion)
3. Have one correct answer and at least 3 distractors or alternatives
4. Make sure distractors are plausible

For additional information on writing exam questions, please visit this link - <https://facdev.ucr.edu/writing-effective-test-questions>

# Questions

\*Enter one question per row

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Student Name | Question Stem | Correct Answer | Alternative 1 | Alternative 2 | Alternative 3 |
| Bhakti Saoji | Residual layers sum the information, and it results in a \_\_\_\_\_\_ network | thinner | simple | fatter | complex |
| Bhakti Saoji | Concatenation layer combines multiple inputs by concatenating making the network \_\_\_\_\_. | fatter | thinner | complex | simple |
| Hayden Myers | \_\_\_\_ require fewer parameters than a fully connected layer because the parameters are shared across columns thereby improving computation efficiency | Convolution layers | Pooling layers | Input layers | Fully connected layers |
| Hayden Myers | \_\_\_\_\_ retains information that would otherwise be disregarded | padding | pooling | Fully connected layer | Output layer |
| Moises Marin | The dimension of a feature map is determined by the input dimension, padding dimension, filter dimension and the \_\_\_\_\_\_\_. | stride | Output dimension | Pooling dimension | Horizontal dimension |
| Moises Marin | When using CNN for image classification, the \_\_\_\_\_\_\_ layer is useful when you want to check if a particular object exists in an image, more than its position. | pooling | padding | input | output |
| Timothy Walsh | Which one of the following statements is **not** true about skip layers? | Skip layers help mitigate the vanishing gradient problem. | Adding a skip layer helps the network remember latent features that it may have learned early | A skip layer is handled through two types of layers: concatenation layers and residual layers | Skip layers are introduced to solve the problem of bottlenecking. |
| Timothy Walsh | In CNN, width, height, and stride are all examples of \_\_\_\_\_\_\_\_. | Hyperparameters | Learning parameters | Weights | Feature maps |
| Bhawuk Luthra | A\_\_\_\_\_\_ is a stage of feature extraction that consists of multiple convolutions that are usually stacked then combined with a concatenation layer or a residual layer | Filter | Block | Hidden layer | Skip layer |
| Bhawuk Luthra | For CNN, grayscale images require \_\_\_ channel(s) while color images need \_\_\_ channel(s) | 2, 4 | 2, 3 | 1, 4 | 1, 3 |
| Suraj Goel | Which of the following about filters is **not** true? | Filters have weights | Each filter creates non-equivariant representations of the input to optimize learning | Filters have a bias term | The parameters in each filter are shared by multiple columns in the data. |
| Suraj Goel | Which localized summary can a pooling layer provide? | Only average summary | Only minimum and maximum summaries | Average, minimum, and maximum summaries | None, summaries are only done with filters, not pooling layers |
| Zach Miller | Which statements is **not** true about cardinality? | It is the number of blocks within a transformation set. | It can be expensive to train. | It is an alternative to going deeper or wider for increased accuracy. | If skip layers are used, residual connections are recommended to reduce training cost. |
| Zach Miller | Which of these is **not** a reasonable padding rule? | The horizontal and vertical padding sizes are independent of each other. | Padding is added first to the right side then the left. | Images are padded with zeros. | If the stride is 2, the output image size is double the input image size. |
|  |  |  |  |  |  |
|  |  |  |  |  |  |