|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Layer No. | | Layer Type | Kernel size  (for conv and pooling layers) | | | Input | Output  dimension | | Input | Output  Channels  (for conv layers) |
| 1 | | Conv1 | 3 | | | 32 | 32 | | 3 | 9 |
| 2 | | relu | - | | | 32 | 32 | | - |
| 3 | | Conv2 | 3 | | | 32|32 | | 9|36 |
| 4 | | relu | - | | | 32 | 32 | | - |
| 5 | | pool | 2 | | | 32 | 16 | | - |
| 6 | | Batch1 | - | | | 16 | 16 | | 36|36 |
| 7 | | Conv3 | 3 | | | 16 | 16 | | 36 | 72 |
| 8 | | relu | - | | | 16 | 16 | | - |
| 9 | | Conv4 | 3 | | | 16 | 14 | | 72 | 144 |
| 10 | | relu | - | | | 14 | 14 | | - |
| 11 | | Batch2 | - | | | 14 | 14 | | 144 | 144 |
| 12 | | pool2 | 2 | | | 14 | 7 | | - |
| 13 | | Conv5 | 3 | | | 7 | 7 | | 144 | 288 |
| 14 | | Relu | - | | | 7|7 | | - |
| 15 | | Conv6 | 3 | | | 7|7 | | 288 | 576 |
| 16 | | relu | - | | | 7 | 7 | | - |
| 17 | | Batch3 | - | | | 7 | 7 | | 576 | 576 |
| 18 | | Linear |  | | | 28224 | 882 | | - |
| 19 | B1 | | | - | 882 | 882 | | - | | |
| 20 | ReLu | | | - | 882 | 882 | | - | | |
| 21 | Linear | | | - | 882 | 441 | | - | | |
| 22 | B1 | | | - | 441 | 441 | | - | | |
| 23 | ReLu | | | - | 441 | 441 | | - | | |
| 24 | Linear | | | - | 441 | 441 | | - | | |
| 25 | ReLu | | | - | 441 | 441 | | - | | |

Used the mean and standard deviation - (0.485, 0.456, 0.406), (0.229, 0.224, 0.225)

Used a kernel of size 3.

Constructed 6 conv layers, 2 batches and 2 maxpoolings. The conv layer affected the result, as I had experimented with 2 layers at first, and I increased the number of conv layers I had used while normalizing the outcome of the conv layers.

When constructing the fc layers, I had experimented inserting the normalization layer before and after the ReLU layer, and it worked better inserting the normalization before the ReLU.

Tuning the momentum had little to no effect on the accuracy result but tuning the learning rate hyperparameter greatly influenced the result (hugely influenced the accuracy improvement).