Cifar-10 Dataset MLP

1. Test loss = 1.5204109256744385, Test accuracy = 0.4595
   1. batch\_size = 128
   2. num\_classes = 10
   3. epochs = 10
   4. Layers = 3
   5. Number of neurons in a layer = 512
   6. Activation = “relu”
   7. Dropout = 0.2
2. Test loss =1.5232495113372804, Test accuracy = 0.465
   1. batch\_size = 128
   2. num\_classes = 10
   3. epochs = 20
   4. Layers = 3
   5. Number of neurons in a layer = 512
   6. Activation = “relu”
   7. Dropout = 0.2
3. Test loss =1.663145195388794, Test accuracy = 0.41
   1. batch\_size = 128
   2. num\_classes = 10
   3. epochs = 5
   4. Layers = 3
   5. Number of neurons in a layer = 512
   6. Activation = “relu”
   7. Dropout = 0.2
4. Test loss =1.7676741889953613, Test accuracy = 0.3765
   1. batch\_size = 64
   2. num\_classes = 10
   3. epochs = 10
   4. Layers = 3
   5. Number of neurons in a layer = 512
   6. Activation = “relu”
   7. Dropout = 0.2
5. Test loss =1.60404016170167, Test accuracy = 0.4195
   1. batch\_size = 64
   2. num\_classes = 10
   3. epochs = 10
   4. Layers = 3
   5. Number of neurons in a layer = 256
   6. Activation = “relu”
   7. Dropout = 0.2
6. Test loss =1.6811268283843994, Test accuracy = 0.4059
   1. batch\_size = 64
   2. num\_classes = 10
   3. epochs = 10
   4. Layers = 3
   5. Number of neurons in a layer = 128
   6. Activation = “relu”
   7. Dropout = 0.2
7. Test loss =1.7700792478561502, Test accuracy = 0.3713
   1. batch\_size = 64
   2. num\_classes = 10
   3. epochs = 10
   4. Layers = 6
   5. Number of neurons in a layer = 128
   6. Activation = “relu”
   7. Dropout = 0.2
8. Test loss =1.676577506446385, Test accuracy = 0.4066
   1. batch\_size = 64
   2. num\_classes = 10
   3. epochs = 10
   4. Layers = 3
   5. Number of neurons in a layer = 128
   6. Activation = PReLU
   7. Dropout = 0.2
9. Test loss =1.579379511642456, Test accuracy = 0.4291
   1. batch\_size = 64
   2. num\_classes = 10
   3. epochs = 10
   4. Layers = 3
   5. Number of neurons in a layer = 128
   6. Activation = ELU
   7. Dropout = 0.2
10. Test loss =1.6511323253631591, Test accuracy = 0.4045
    1. batch\_size = 64
    2. num\_classes = 10
    3. epochs = 10
    4. Layers = 3
    5. Number of neurons in a layer = 128
    6. Activation = “hard\_sigmoid”
    7. Dropout = 0.2
11. Test loss =1.6511323253631591, Test accuracy = 0.4045
    1. batch\_size = 128
    2. num\_classes = 10
    3. epochs = 10
    4. Layers = 3
    5. Number of neurons in a layer = 256
    6. Activation = “elu”
    7. Dropout = 0.2

Cifar-10 Dataset CNN

1. Test loss = 1.0162681089401244, Test accuracy = 0.6436
   1. batch\_size = 32
   2. num\_classes = 10
   3. epochs = 10
   4. Layers = 3
   5. Number of neurons in a layer = 512
   6. Activation = “relu”
   7. Dropout = 0.25
   8. Learning rate = 0.0001
2. Test loss =1.6457371658325195, Test accuracy = 0.4157
   1. batch\_size = 32
   2. num\_classes = 10
   3. epochs = 5
   4. Layers = 3
   5. Number of neurons in a layer = 512
   6. Activation = “relu”
   7. Dropout = 0.25
   8. Learning rate = 0.0001
3. Test loss =1.0776711846008178, Test accuracy = 0.6214
   1. batch\_size = 64
   2. num\_classes = 10
   3. epochs = 5
   4. Layers = 3
   5. Number of neurons in a layer = 512
   6. Activation = “relu”
   7. Dropout = 0.25
   8. Learning rate = 0.0001
4. Test loss =1.158746971321106, Test accuracy = 0.5977
   1. batch\_size = 32
   2. num\_classes = 10
   3. epochs = 5
   4. Layers = 3
   5. Number of neurons in a layer = 512
   6. Activation = “elu”
   7. Dropout = 0.25
   8. Learning rate = 0.0002
5. Test loss =1.079292138671875, Test accuracy = 0.6229
   1. batch\_size = 64
   2. num\_classes = 10
   3. epochs = 5
   4. Layers = 3
   5. Number of neurons in a layer = 512
   6. Activation = “elu”
   7. Dropout = 0.25
   8. Learning rate = 0.0001

Metrics for MLP

1. Test loss =1.4502176475524902, Test accuracy = 0.4817, top\_k\_accuracy = 0.9208
   1. batch\_size = 64
   2. num\_classes = 10
   3. epochs = 10
   4. Layers = 3
   5. Number of neurons in a layer = 128
   6. Activation = ELU
   7. Dropout = 0.2
   8. Matrics = categorical\_accuracy, top\_k\_categorical\_accuracy
2. Mean\_prediction, Test loss =1.5346941858291625, Test accuracy = 0.4462
   1. batch\_size = 64
   2. num\_classes = 10
   3. epochs = 10
   4. Layers = 3
   5. Number of neurons in a layer = 128
   6. Activation = ELU
   7. Dropout = 0.2
   8. Matrics = categorical\_accuracy, custom