Cifar-10 Dataset MLP

1. Test loss = 1.5600060455322267, Test accuracy = 0.4467
   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
2. Test loss = 1.5545186204910277, Test accuracy = 0.4637
   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
3. Test loss: 1.691791695022583, Test accuracy: 0.3898
   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
4. Test loss: 1.6212852376937865, Test accuracy: 0.415
   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
5. Test loss: 1.7278007930755614, Test accuracy: 0.4009
   1. batch\_size = 64
   2. num\_classes = 10
   3. epochs = 10
   4. Layers = 5
   5. Number of neurons in a layer = 256
   6. Activation = “relu”
   7. Dropout = 0.2
6. Test loss: 1.7867918239593505, Test accuracy: 0.3629
   1. batch\_size = 64
   2. num\_classes = 10
   3. epochs = 10
   4. Layers = 5
   5. Number of neurons in a layer = 256
   6. Activation = “tanh”
   7. Dropout = 0.2
7. Test loss: 1.8273195960998536, Test accuracy: 0.3907
   1. batch\_size = 64
   2. num\_classes = 10
   3. epochs = 10
   4. Layers = 5
   5. Number of neurons in a layer = 256
   6. Activation = “elu”
   7. Dropout = 0.2
8. Test loss: 1.7028786176681519, Test accuracy: 0.3912
   1. batch\_size = 64
   2. num\_classes = 10
   3. epochs = 10
   4. Layers = 5
   5. Number of neurons in a layer = 256
   6. Activation = “elu”
   7. Dropout = 0.3

Cifar-10 Dataset CNN

1. Test loss: 1.011834213066101, Test accuracy: 0.6388
   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
4. Learning rate = 0.0001 Test loss: 1.1862906442642212, Test accuracy: 0.5815
   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
5. 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

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