```
pip install tensorflow
```

Show hidden output

```
pip install torch torchvision
```

Show hidden output

```
from tensorflow.keras.datasets import mnist, cifar10
import tensorflow as tf
import torch
import torch.nn as nn
import matplotlib.pyplot as plt

# Load MNIST
(X_train_mnist, y_train_mnist), (X_test_mnist, y_test_mnist) = mnist.load_data()
print(f"MNIST Dataset: Train - {X_train_mnist.shape}, Test - {X_test_mnist.shape}")

# Load CIFAR-10
(X_train_cifar, y_train_cifar), (X_test_cifar, y_test_cifar) = cifar10.load_data()
print(f"CIFAR-10 Dataset: Train - {X_train_cifar.shape}, Test - {X_test_cifar.shape}")
```

```
Downloading data from https://storage.googleapis.com/tensorflow/tf-keras-datasets/mnist.npz
11490434/11490434 ━━━━━━━━━━━━━━━━━━━━ 0s 0us/step
MNIST Dataset: Train - (60000, 28, 28), Test - (10000, 28, 28)
Downloading data from https://www.cs.toronto.edu/~kriz/cifar-10-python.tar.gz
170498071/170498071 ━━━━━━━━━━━━━━━━━━━━ 3s 0us/step
CIFAR-10 Dataset: Train - (50000, 32, 32, 3), Test - (10000, 32, 32, 3)
```

```
#Define a basic dense Layer
layer = tf.keras.layers.Dense(units=10,activation='relu')
print(f"TensorFlow Layer: {layer}")

#Define a basic dense Layer
layer = nn.Linear(in_features=10,out_features=5)
print(f"Pytorch Layer: {layer}")

#Viualize MNIST Sample
plt.imshow(X_train_mnist[0],cmap='gray')
plt.title(f"MNIST Label: {y_train_mnist[0]}")
plt.show()

#Visualize CIFAR-10 Sample
plt.imshow(X_train_cifar[0])
plt.title(f"CIFAR-10 Label: {y_train_cifar[0]}")
plt.show()
```

```
TensorFlow Layer: <Dense name=dense, built=False>
Pytorch Layer: Linear(in_features=10, out_features=5, bias=True)
```