```
# Import necessary libraries
import numpy as np
import tensorflow as tf
from tensorflow.keras.applications import MobileNetV2
from tensorflow.keras.models import Sequential
from tensorflow.keras.layers import Dense, GlobalAveragePooling2D
import matplotlib.pyplot as plt

num_samples = 1000 # Number of samples
num_classes = 10 # Number of classes
X_train = np.random.rand(num_samples, 224, 224, 3).astype(np.float32)
y_train = np.random.randint(0, num_classes, num_samples)
print("X_train shape:", X_train.shape)
print("y_train shape:", y_train.shape)
```

```
X_train shape: (1000, 224, 224, 3)
y_train shape: (1000,)
```

```
# Load pre-trained MobileNetV2 model + higher-level layers
base_model = MobileNetV2(weights='imagenet', include_top=False, input_shape=(
224
        # Display the model architecture
base_model.summary()
```