

In [1]:

```
import re
from sklearn.datasets import load_digits
from sklearn.model_selection import train_test_split
import numpy as np

import matplotlib.pyplot as plt
import seaborn as sns
from sklearn import metrics

%matplotlib inline
digits=load_digits()
```

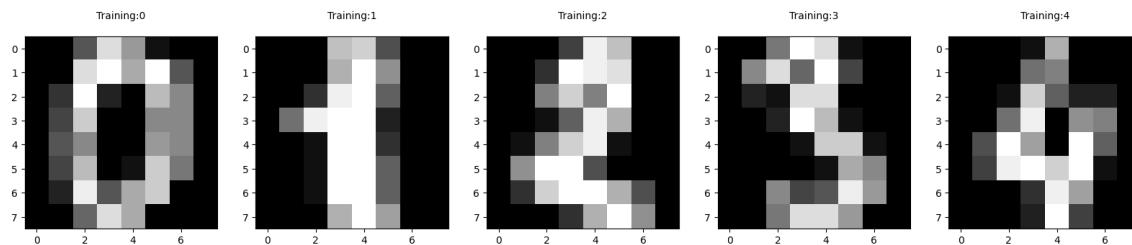
In [2]:

```
print("Image Data Shape",digits.data.shape)
print("Label Data Shape",digits.target.shape)
```

Image Data Shape (1797, 64)  
Label Data Shape (1797,)

In [3]:

```
plt.figure(figsize=(20,4))
for index,(image,label) in enumerate(zip(digits.data[0:5],digits.target[0:5])):
    plt.subplot(1,5,index+1)
    plt.imshow(np.reshape(image,(8,8)),cmap=plt.cm.gray)
    plt.title("Training:%i\n"%label,fontsize=10)
```



In [4]:

```
from sklearn.model_selection import train_test_split
x_train,x_test,y_train,y_test=train_test_split(digits.data,digits.target,test_size=0.30,
```

In [5]:

```
print(x_train.shape)
```

(1257, 64)

In [6]:

```
print(y_train.shape)
```

(1257,)

In [7]:

```
print(x_test.shape)
```

(540, 64)

In [9]:

```
print(y_test.shape)
```

(540,)

In [10]:

```
from sklearn.linear_model import LogisticRegression
```

In [ ]: