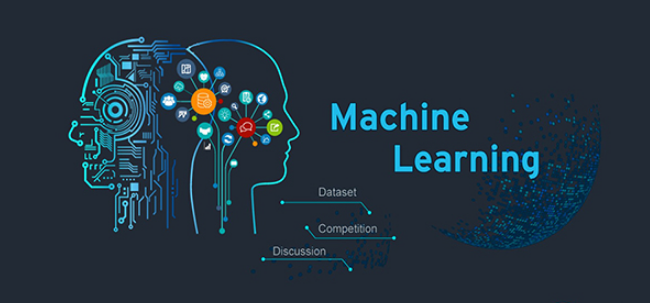
**Selected - 1**



**Number Team : 5**

Prepared by:

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**Faculty Name : Computers and artificial intelligence Helwan**

**Image Dataset**

**\*\*General Information :**

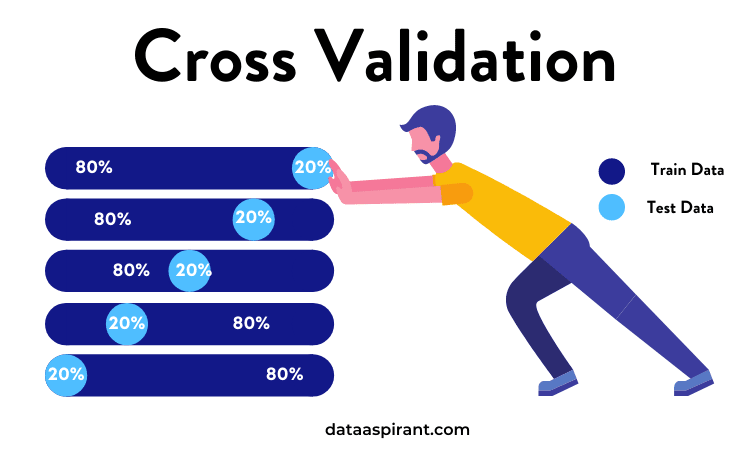
## 1. The Name Dataset : Columbia Object Image Library (COIL-100) Dataset

**2. Number of** **Classes : 100**

**Their Labels: 20**

**3.Total Number of** **Samples : 7200 image**

**The Image** **Size : 128\*128\*3**

**4.** 

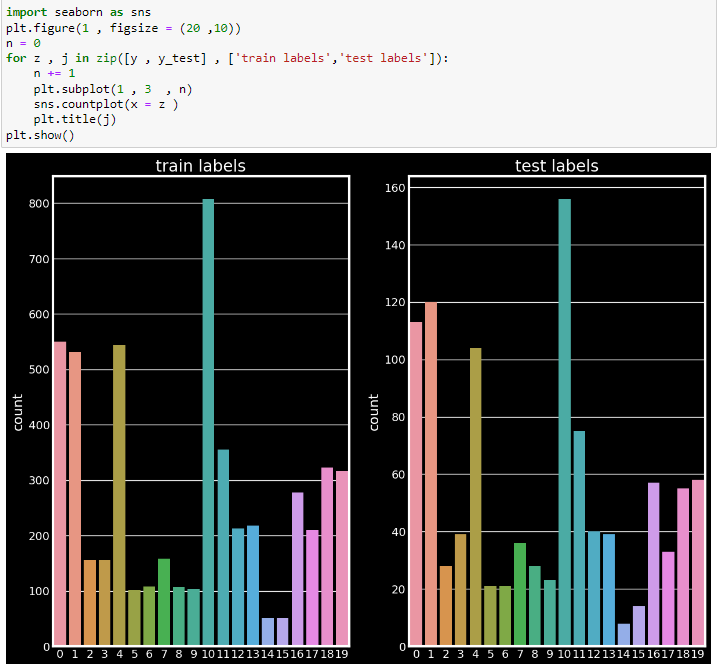
**Number of Training : 5040**

**Number of Testing : 2160**

\*\*Implementation Details:

**1. At feature extraction phase : There is no in the model**

**2. Is cross-validation used? Yes**



**Number of Training : 5040 = 70%**

**Number of Testing : 2160 = 30%**

**3.Hyperparameters used:**

**1. Learning Rate = 0.1**

**2. Optimizer : Adam "tensorflow"**

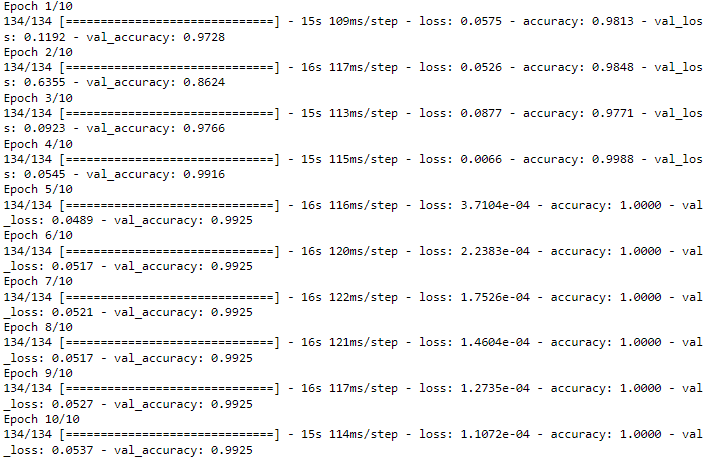
**3. Regularization : Overfit the Dataset :**

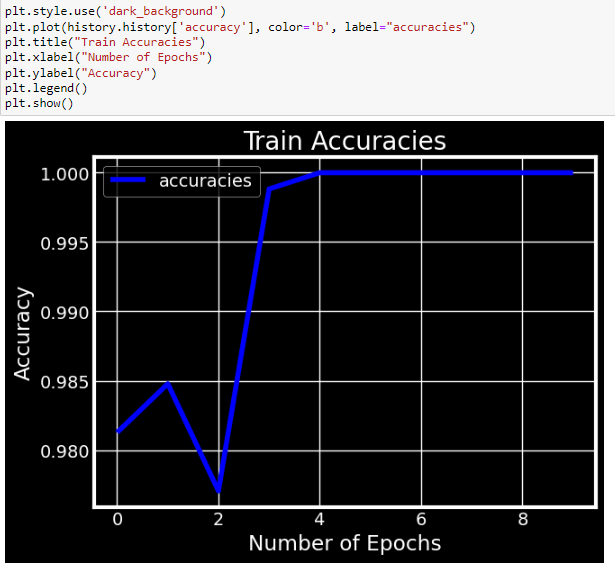
**4. Batch Size = 128**

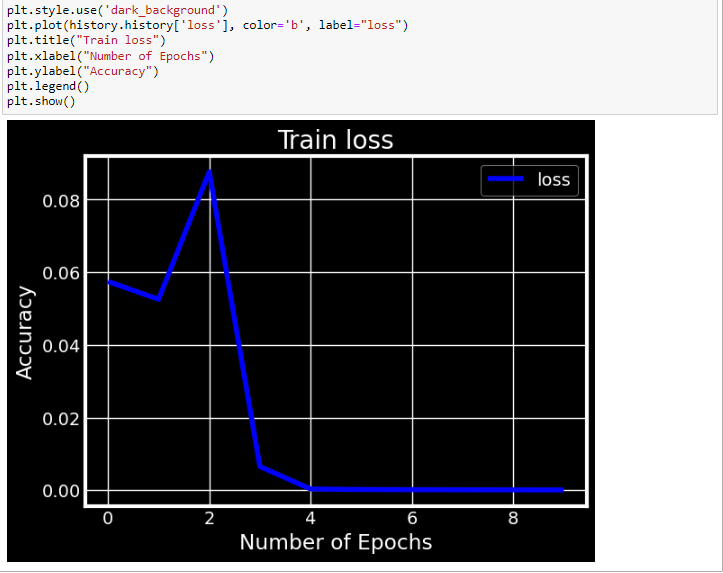
**5. Number of epochs = 10**



**" We use 10 epochs, stopped in 4 epochs with accuracy = 99.16% Then we increase epochs to 10 epochs with accuracy = 99.25%"**

****

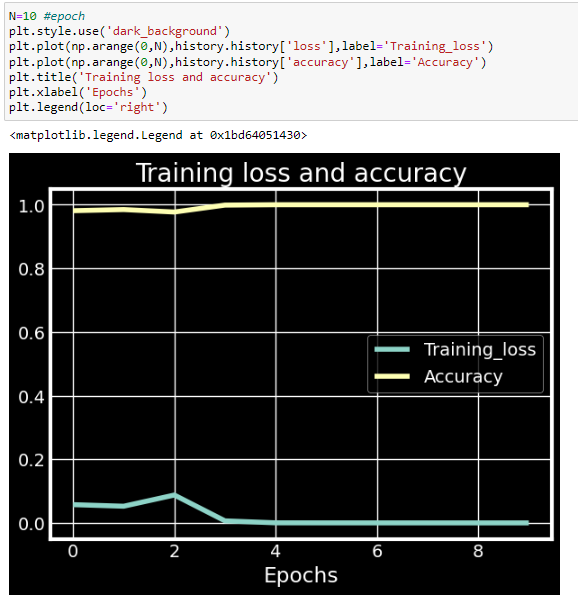




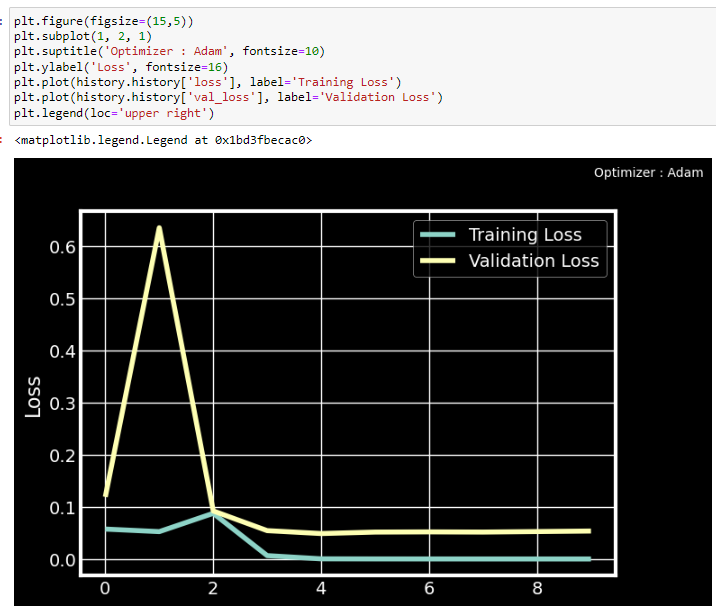
**\*\*Results Details:**

**1. Loss curve :**

**a. Train loss & Accuracy:**

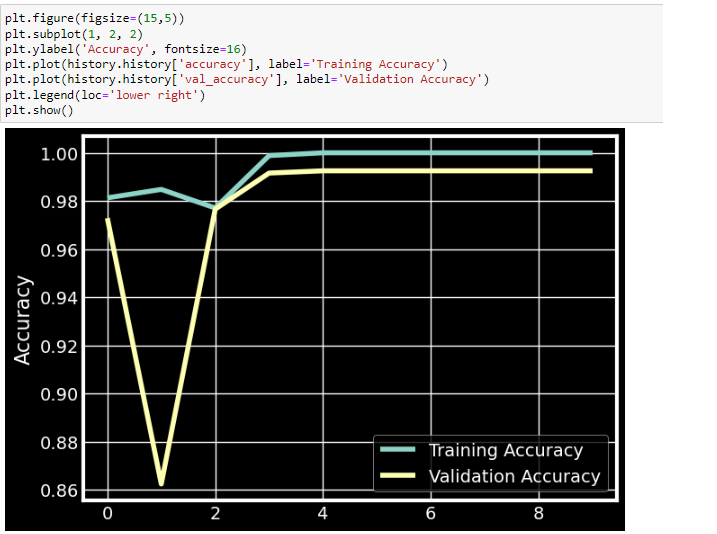
****

**b. Training & Validation loss:**

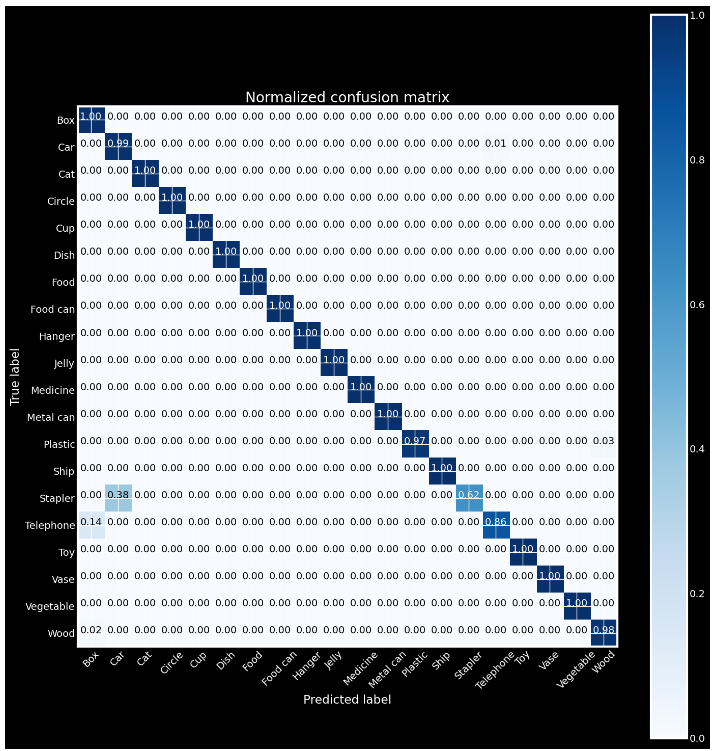


**2.** **Accuracy :**

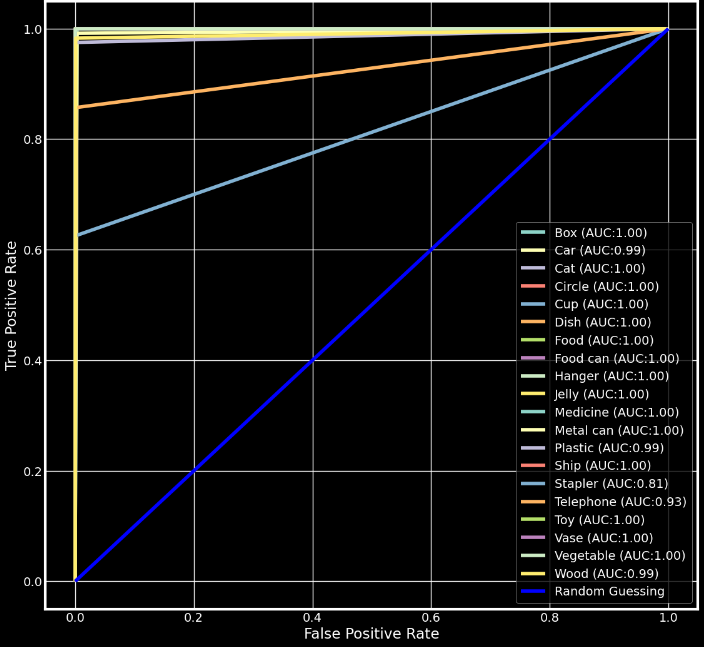
**\* Training & Validation Accuracy:**

****

**3. Confusion Matrix:**



**4. ROC Curve:**



\*\* Classification Report :

