

# Offline-3 Evaluation Report

Najrin Sultana

Student ID : 1605042

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## MNIST Dataset :

Trained for 5 epochs with learning rate=0.001. The learning rate was divided by 2 after each two epochs. From the given test set 50% was used for validation and rest for the testing. The evaluation scores are given below :

### Epoch-1 :

#### Train Set:

**Loss:** 0.1123980034569683

**Accuracy:** 0.96

**Macro F1:** 0.96

#### Validation Set:

**Loss:** 0.13616665355938595

**Accuracy:** 0.96

**Macro F1:** 0.95

### Epoch-2 :

#### Train Set:

**Loss:** 0.084622377560736

**Accuracy:** 0.97

**Macro F1:** 0.97

#### Validation Set:

**Loss:** 0.10778744586469338

**Accuracy:** 0.96

**Macro F1:** 0.96

### **Epoch-3 :**

#### **Train Set:**

**Loss:** 0.0719189215004148

**Accuracy:** 0.98

**Macro F1:** 0.98

#### **Validation Set:**

**Loss:** 0.09346817270113965

**Accuracy:** 0.97

**Macro F1:** 0.97

### **Epoch-4 :**

#### **Train Set:**

**Loss:** 0.059680782925331265

**Accuracy:** 0.98

**Macro F1:** 0.98

#### **Validation Set:**

**Loss:** 0.079593928974567

**Accuracy:** 0.97

**Macro F1:** 0.97

### **Epoch-5 :**

#### **Train Set:**

**Loss:** 0.05584600218845737

**Accuracy:** 0.98

**Macro F1:** 0.98

#### **Validation Set:**

**Loss:** 0.0759827730290707

**Accuracy:** 0.97

**Macro F1:** 0.97

### **Test Set :**

**Loss:** 0.03345282965139031

**Accuracy:** 0.99

**Macro F1:** 0.99

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### **CIFAR-10 Dataset :**

Trained for 5 epochs with learning rate=0.001. The learning rate was divided by 2 after each two epochs. From the given test set 50% was used for validation and rest for the testing. The evaluation scores are given below :

#### **Epoch-1 :**

##### **Train Set:**

**Loss:** 1.5757173672468812

**Accuracy:** 0.44

**Macro F1:** 0.42

##### **Validation Set:**

**Loss:** 1.5607947575859842

**Accuracy:** 0.44

**Macro F1:** 0.43

#### **Epoch-2 :**

##### **Train Set:**

**Loss:** 1.4369874595622654

**Accuracy:** 0.49

**Macro F1:** 0.47

**Validation Set:****Loss:** 1.435005433449374**Accuracy:** 0.49**Macro F1:** 0.47**Epoch-3 :****Train Set:****Loss:** 1.3650088862870189**Accuracy:** 0.51**Macro F1:** 0.50**Validation Set:****Loss:** 1.3718770862479637**Accuracy:** 0.51**Macro F1:** 0.50**Epoch-4 :****Train Set:****Loss:** 1.293272433459194**Accuracy:** 0.54**Macro F1:** 0.53**Validation Set:****Loss:** 1.311823947378315**Accuracy:** 0.54**Macro F1:** 0.53**Epoch-5 :****Train Set:****Loss:** 1.2654495944850799**Accuracy:** 0.55**Macro F1:** 0.55

**Validation Set:**

**Loss:** 1.2887409386619637

**Accuracy:** 0.55

**Macro F1:** 0.55

**Test Set :**

**Loss:** 1.3286839011157536

**Accuracy:** 0.53

**Macro F1:** 0.53