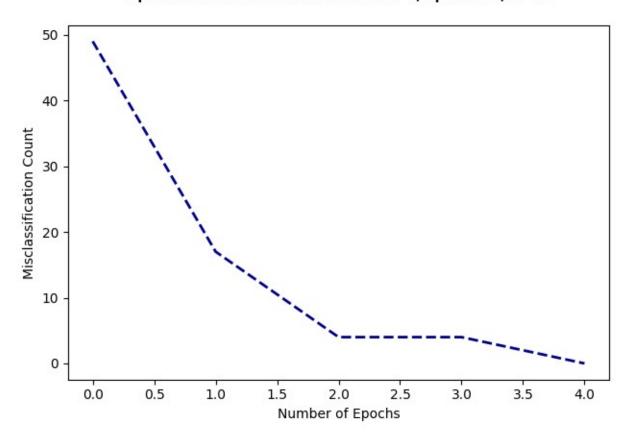
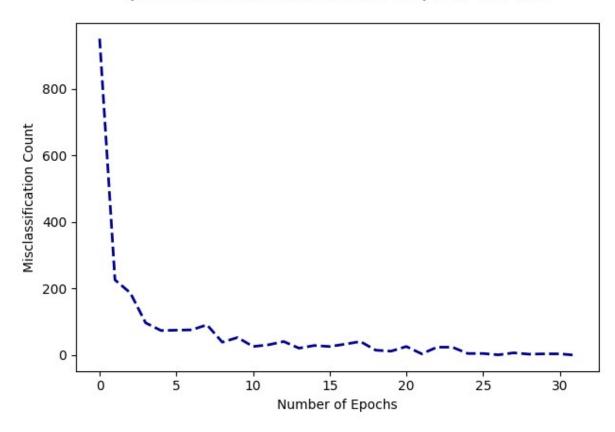
Epochs vs Misclassifications for eta=1, epsilon=0, n=50



### **Executing Configuration F:**

• Percentage of misclassified test samples: 45.6%

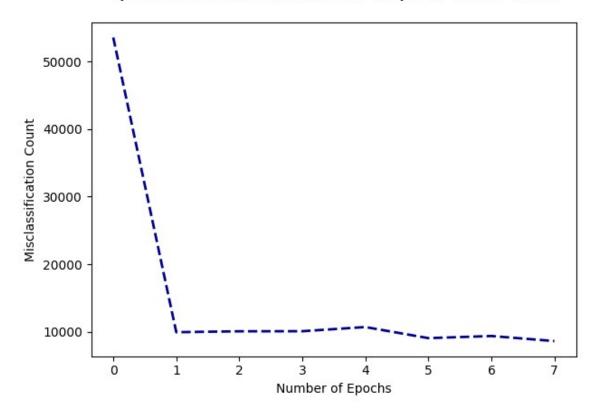
#### Epochs vs Misclassifications for eta=1, epsilon=0, n=1000



# **Executing Configuration G:**

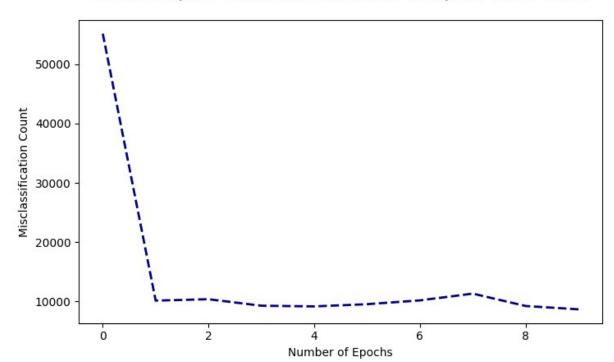
Percentage of misclassified test samples: 17.8%

Epochs vs Misclassifications for eta=1, epsilon=0.15, n=60000



# **Executing Configuration H:**

• Percentage of misclassified test samples: 17.02%

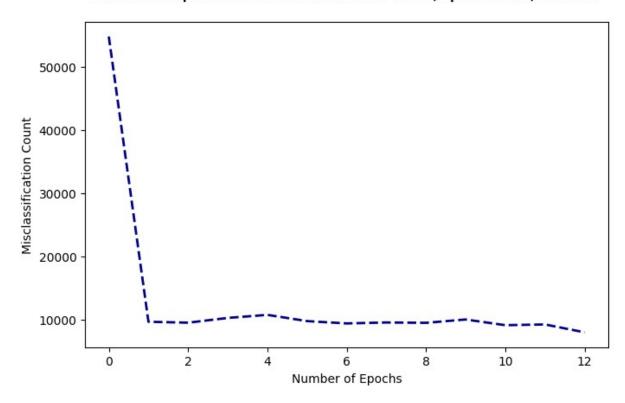


Iteration 1: Epochs vs Misclassifications for eta=0.5, epsilon=0.15, n=60000

# **Executing Configuration I Iteration 1:**

Percentage of misclassified test samples: 17.97%

Iteration 2: Epochs vs Misclassifications for eta=1, epsilon=0.15, n=60000

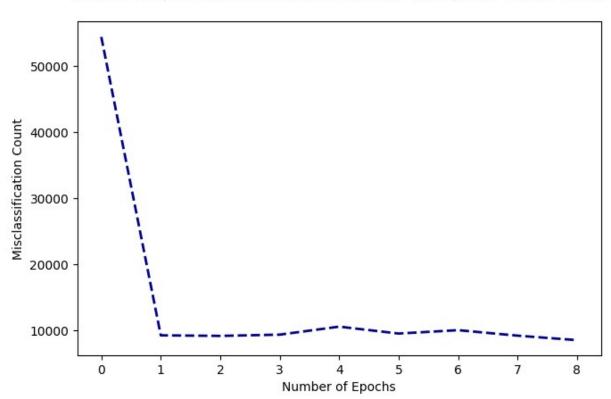


# **Executing Configuration I Iteration 2:**

Percentage of misclassified test samples: 17.94%

#### **Executing Configuration I Iteration 3:**

Percentage of misclassified test samples: 14.51%



Iteration 3: Epochs vs Misclassifications for eta=1.5, epsilon=0.15, n=60000

### **Observations and Discrepancies:**

- **Overfitting:** If the model demonstrates 0% error during training but exhibits a high error rate during testing, it is indicative of overfitting to the training data.
- **Data Variability:** Discrepancies in error rates may also arise due to differences between the training and testing datasets.
- Model Complexity: A model that is too simplistic may fail to encapsulate all the intricacies of the data, leading to discrepancies in error rates.
- Increased Training Data: Enhancing the quantity of training data (n) might result in improved generalization and a decrease in discrepancies between training and testing error rates, but this is effective only up to a certain threshold.