Using device: CUDA

Task execution time: 0.98 seconds

Completed Tasks:

Task 1.1: Load CIFAR-10 Dataset ✓

Task 1.2: Visualize CIFAR-10 Samples ✓

Task 1.3: Convert to Grayscale ✓

Task 2.1: Extract SIFT Features ✓

Task 2.2: Visualize SIFT Keypoints ✓

Task 3.1: Generate Codebook ✓

Task 3.2: Create BoVW Histograms ✓

Task 4.1: Train SVM Classifier ✓

Reset (Clear Task)

CIFAR-10 Image Classification with BoVW and CNN

This application implements image classification on the CIFAR-10 dataset using:

- Bag of Visual Words (BoVW) model with SVM classifier
- Deep Learning approach with ResNet-18 CNN
- Data augmentation techniques

Follow the tasks step by step using the dropdown menu.

Select a task to run:

Task 4.1: Train SVM Classifier

Run Task

Task 4.1: Train SVM Classifier

SVM regularization parameter (C)

10.00

0.10 20.00

SVM kernel

rbf

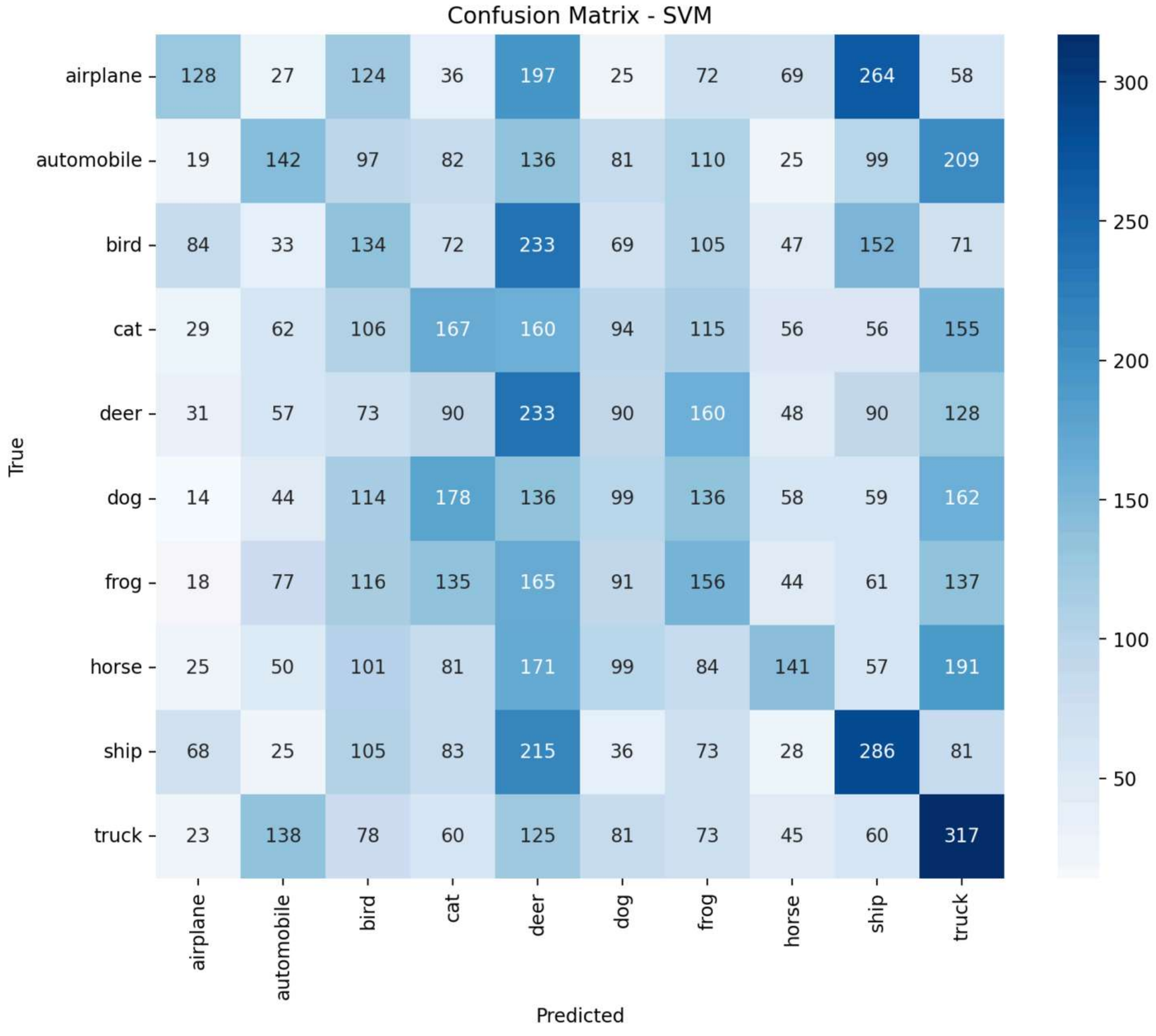
SVM Classification Results

Accuracy: 0.1803

Precision: 0.1914

Recall: 0.1803

F1-Score: 0.1774



SVM classifier trained successfully!