

ML Lab Assignment 4

Hand Written Digit Recognition with Neural Networks.

The dataset consists of images represented as numerical arrays, where each image is of size 28x28 pixels, and corresponding labels indicating the digit represented in the image, making it suitable for digit recognition tasks such as handwritten digit classification. Each sample is represented as a column vector, and the entire dataset is transposed to maintain consistent dimensions for input and output.

- Complete the provided functions in the given code skeleton.
- Ensure that each function performs the specified task accurately.
- Test each function individually before moving to the next one to identify and fix any errors.
- Once all functions are implemented, run the entire model to train the neural network.
- Experiment with different hyperparameters such as the number of neurons in the hidden layer and learning rate to observe their impact on model performance.
- Analyze and interpret the accuracy results obtained on the training and test datasets.