Project: Convolutional Neural Networks: Recognizing Street View Housing Number Digits

Marks: 30

Hello, and thank you for joining us here at the project on classifying data using convolutional neural networks. Regarding this undertaking, we will keep using the Street View Housing Numbers (SVHN) picture collection as our primary resource.

Context: **

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Recognizing things in their natural settings is one of the most fascinating challenges in the field of deep learning. The capacity to analyze visual information using machine learning algorithms may be highly valuable, as shown by a variety of applications.

The SVHN dataset includes approximately 600,000 digits that have been identified and were clipped from street-level photographs. It is one of the image recognition datasets that is used the most often. It has been put to use in the neural networks that Google has developed in order to enhance the quality of maps by automatically trancribing address numbers from individual pixel clusters. The combination of the transcribed number and the known street address makes it easier to locate the building that the number represents.

Objective: **

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Develop a CNN model that is capable of recognizing the digits that are shown in the photos.

Dataset:

To reduce the amount of time spent computing, we will only utilize a portion of the whole original data. The dataset is supplied to you in the form of a.h5 file. All of the fundamental preprocessing procedures have been completed.