

CONQUERING FASHION MNIST WITH CNNs USING COMPUTER VISION



TensorFlow

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OpenVINO™

◉ Abstract:

The Fashion MNIST dataset consists of 60,000 grayscale images belonging to 10 different fashion categories, with an additional 10,000 images for testing.

Our proposed methodology leverages the power of CNNs, a class of deep learning models known for their ability to capture spatial hierarchies in images.

◉ Introduction:

Fashion MNIST is a dataset that serves as a drop-in replacement for the traditional handwritten digit recognition task of the MNIST dataset.

In recent years, Convolutional Neural Networks (CNNs) have emerged as a powerful technique for image classification tasks.

The Fashion MNIST dataset has emerged as a popular benchmark for evaluating image classification algorithms, specifically in the domain of fashion recognition.

◉ Why:

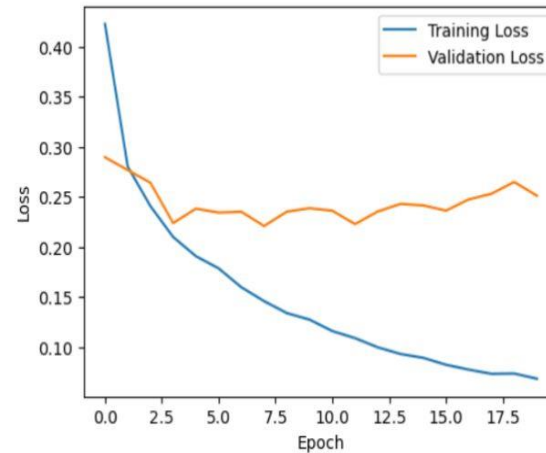
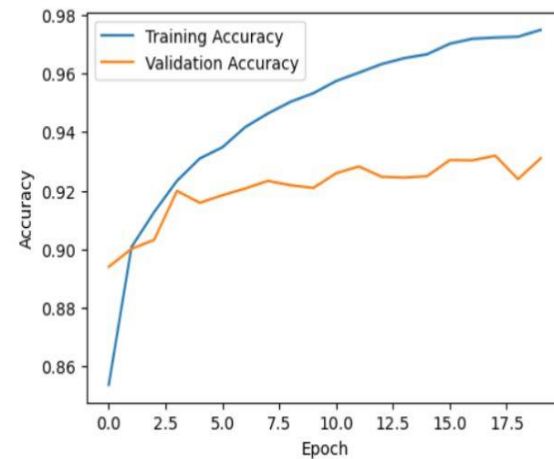
Conquering the Fashion MNIST dataset using CNNs is a significant task with several motivations and benefits. Here are some key reasons for pursuing this objective

- Benchmark Dataset
- Real-World Relevance
- Challenging Problem
- CNNs' Effectiveness
- Advancements in Computer Vision
- Comparative Analysis

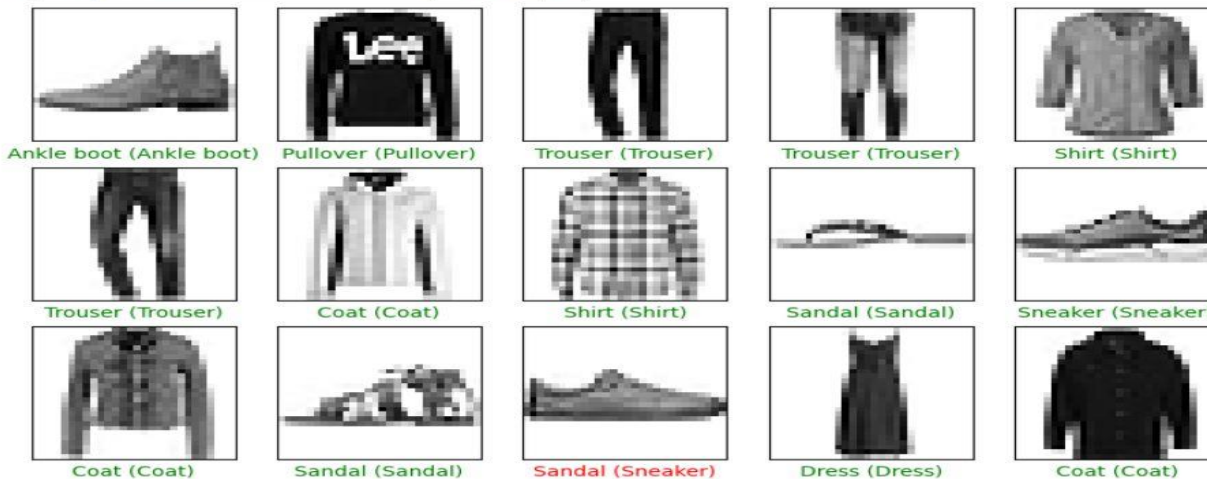
Result:

313/313 - 2s - loss: 0.2513 - accuracy: 0.9311 - 2s/epoch - 5ms/step

Test accuracy: 93.11000108718872



313/313 [-----] - 2s 6ms/step



◉ Reference:

<https://youtube.com/playlist?list=PLg-UKERBljNxdIQir1wrirZJ50yTp4eHv>

◉ Link to solution:

https://github.com/AntonyNishio/TechWizards_KarunyaInstituteofTechnologyandScience_ConqueringFashionMNISTwithCNNsusingComputerVision.git