MACHINE LEARNING PROJECT:
Neural Network-Based Image Classification

INTRODUCTION:

- Developed a deep learning model utilizing neural networks to classify images of outfits from the Fashion MNIST dataset, achieving high accuracy in recognizing different clothing categories.
- Leveraged TensorFlow for building and training the neural network, employing techniques such as convolutional layers for feature extraction and dropout layers for regularization.
- The model utilized the Adam optimizer for efficient training and sparse categorical cross-entropy as the loss function to handle multi-class classification effectively.
- Visualization of training progress and performance metrics was conducted using Matplotlib, enabling effective analysis of model learning and validation results.

Key Algorithms and Tools Used:

Neural Networks: For image classification tasks, enabling pattern recognition in fashion items.

TensorFlow: As the primary framework for building and training the model.

Matplotlib: For visualizing training metrics, including accuracy and loss over epochs.

This project demonstrated my proficiency in deep learning and image processing, contributing to advancements in automated fashion recognition and potential applications in retail and e-commerce**.**