

Assignment – 15

Design and implement a Python script to detect Deep Fake videos utilizing the "Deepfake Detection Challenge" dataset available on Kaggle.

1. Define the objective of the "Deepfake Detection Challenge" dataset.
2. Describe the characteristics of Deep Fake videos and the challenges associated with their detection.
3. Outline the key steps involved in the implementation of a Deep Fake video detection algorithm using Python.
4. Discuss the importance of dataset preprocessing in training a Deep Fake detection model and suggest potential preprocessing techniques.
5. Propose and justify the choice of at least two machine learning or deep learning algorithms suitable for Deep Fake video detection.
6. Evaluate the performance metrics that can be used to assess the effectiveness of a Deep Fake detection model.
7. Consider the ethical implications of Deep Fake technology and discuss the role of detection mechanisms in addressing these concerns.
8. Write a complete code for this assignment.