**MODULES**

**Data Preprocessing**:

Data collection and curation of diverse deepfake and genuine content.

Data augmentation to increase the dataset's diversity.

Preprocessing of images and videos, such as resizing and normalization.

**Feature Extraction**:

Utilizing deep learning architectures like InceptionNet and other CNN models for feature extraction.

Extracting facial landmarks and audio features to enhance detection accuracy.

**Model Training**:

Training the deepfake detection model using the preprocessed dataset.

Fine-tuning and optimizing the selected CNN architectures.

Ensuring the model's generalization to various deepfake scenarios.

**Real-Time Processing**:

Implementing a real-time video processing pipeline for live deepfake detection.

Developing a user-friendly interface for real-time interaction.

**Ethical and Fairness Considerations**:

Implementing fairness and bias detection mechanisms to ensure the system's equitable performance across different demographic groups.

Addressing privacy concerns and considering the ethical implications of deepfake detection.