Computer Society of India
Student Branch, VIT Pune

CODEFLIX 2025

CODEZILLA

[THE ULTIMATE HACKATHON]

# DEEPFAKE DETECTION ON MOBILE

## TRACK 3: PI-LABS.AI

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# TEAM DETAILS

Team name:- TeachTians

Team Members:-

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2. Udhvarit Rane

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# PROBLEM STATEMENT

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**Deepfake Detection on Mobile:** Design a solution to detect deepfakes in mobile video calls on platforms like WhatsApp or Skype. Use a lightweight API to process 10-second video clips and return results, ensuring efficiency and compatibility with Android and iOS devices.

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# TECH STACK

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Frame Extraction:- API.

Video Processing:-Mediapipe or MTCNN

Deepfake model:- Tiny-Yolo or MobileNet

ML model:- Tensor-flow Lite and Core ML

Storage:- Firebase

# API MODEL USED



## For iOS (AV Foundation)

1. AVCaptureDeviceInput is used to configure inputs, which are then added to the session.
2. The movement of media data from input devices to outputs is controlled by the AVCaptureSession.
3. Data from captured media is sent to output components such as AVCapturePhotoOutput and AVCaptureVideoDataOutput.
4. AVCaptureVideoPreviewLayer allows outputs to be shown in real time or processed further.
5. Media samples from outputs (CMSampleBuffer) can be streamed, saved, or examined.

## For android (Camera2 API)

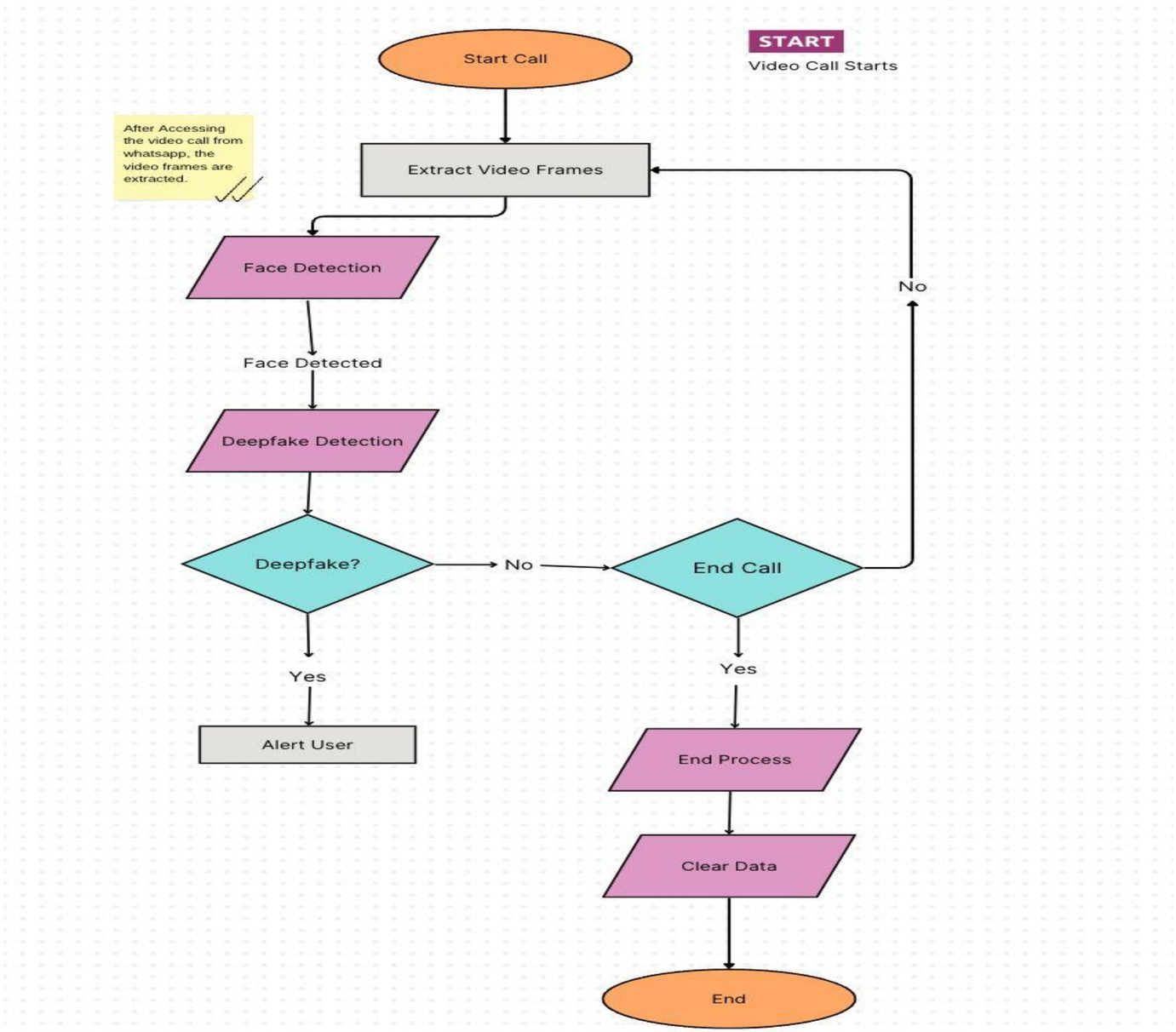
1. The camera hardware is initialized and queried by the CameraManager.
2. The camera is made available for interaction via the CameraDevice.
3. The purpose of a CaptureSession is to stream or take pictures.
4. CaptureRequests with particular parameters are used to define frames.
5. Components like ImageReader are used to process the output, and a Surface is used to show it.

# FEATURES



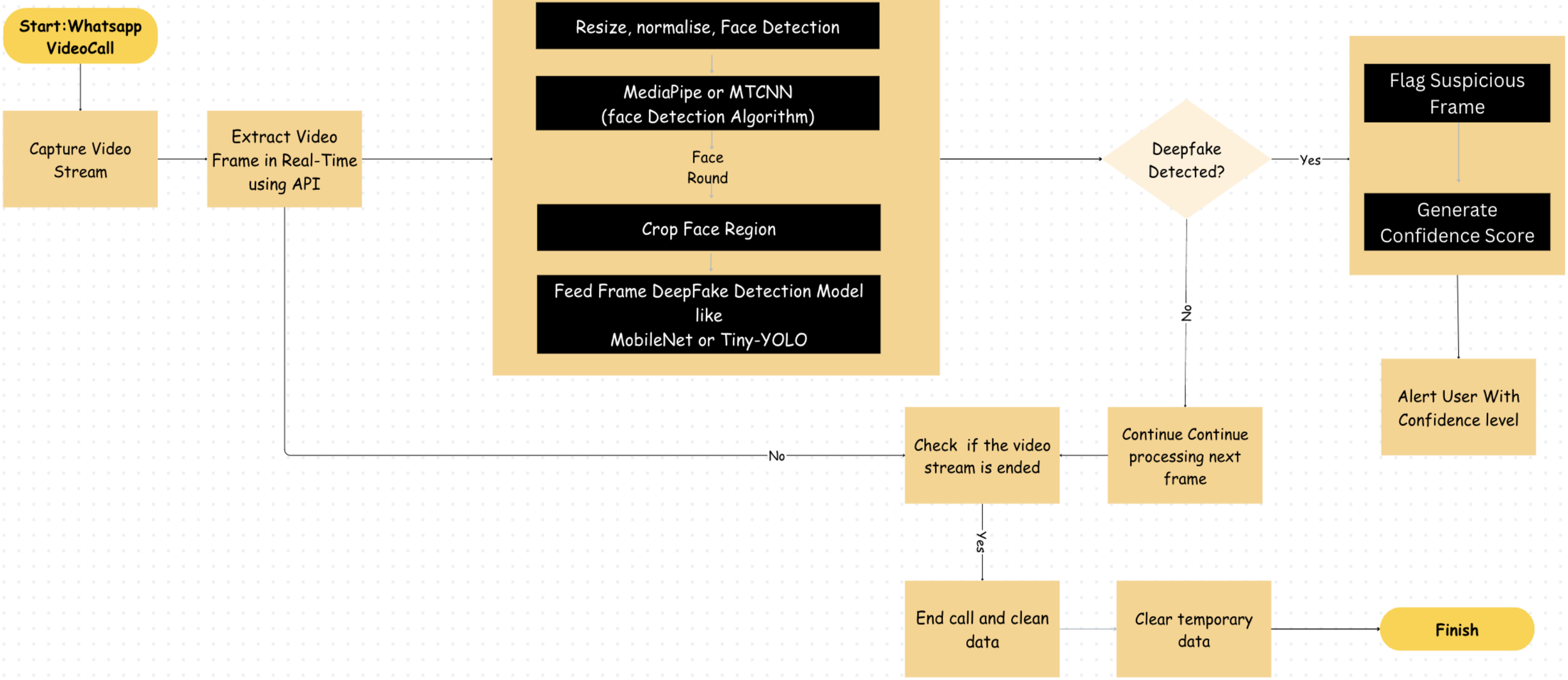
- Source which allows real-time video call streaming.
- Integrates with Android/IOS using APIs.
- Use various models to ensure accuracy, models like Mediapipe, mobileNet, TensorFlow lite, etc.
- Whatsapp Integration Using API.

# DIAGRAM (IF ANY)



# IMPLEMENTATION





# THANK YOU!