

# IMAGE COMPONENT DETECTOR

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## INTRODUCTION

Main aim of this project is to extract important data from images. Using this extracted information description, interpretation and understanding of the scene can be provided by the machine.

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## Features :-

### Object detection

Object tracking is the process of locating an object or multiple objects using either a static or dynamic camera.

### Image recognition

The component of image can be recognised using different MI algorithms or We can use the services provided by aws cloud or google

### Face detection

For face detection many libraries are available. we have used opencv-Haarcascade classifier for classifying the face



### Color detection

Color detection is necessary to recognize objects, it is also used as a tool in various image editing and drawing apps.

### Image processing

Image processing refers to different operation done on the image to extract the important features and by using it we can perform recognition operations.

### Machine learning

Today, examples of machine learning are all around us. Digital assistants search the web and play music in respond to our voice commands

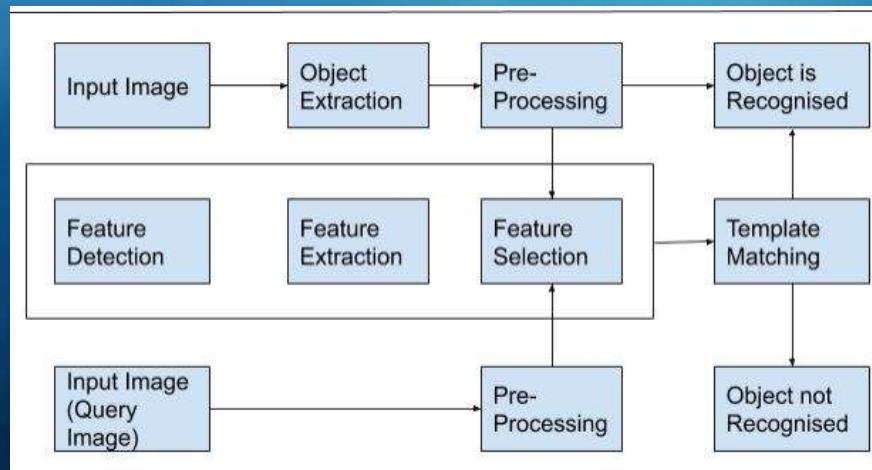
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## Proposed System

Block Diagram , Flow Charts and Future Ideas

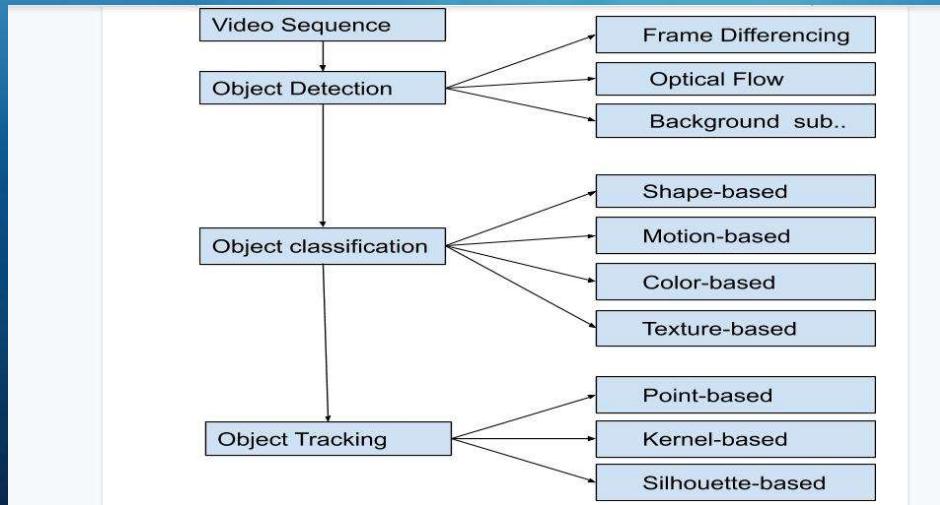
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## Block diagram



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## Flow Chart



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## Implementation

Object Detection , Celebrities detection

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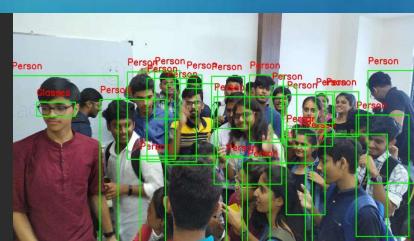
## IMAGE COMPONENT DETECTOR



```
session = boto3.Session(profile_name='default')
Service = session.client('rekognition')

def detect_faces_in_image(imagePath):
    session = boto3.Session(profile_name='default')
    Service = session.client('rekognition')
    image = open(imagePath, "r").read()
    img, angle = exr.readEncodedImagePath().shape[::]
    height, width = exr.readEncodedImagePath().shape[::]
    response = Service.detect_labels(Image={'Bytes': image})
    for objects in response['Labels']:
        if objects['Name'] == 'Person':
            person = objects['Name']
            for box in objects['Instances']:
                box = box['BoundingBox']
                x = int(box['Width'] * box['Left'])
                y = int(box['Height'] * box['Top'])
                w = int(box['Width'] * box['Width'])
                h = int(box['Height'] * box['Height'])

                MyImage = cv2.rectangle(MyImage, (x, y), (x + w, y + h), (0, 255, 0), 2)
```

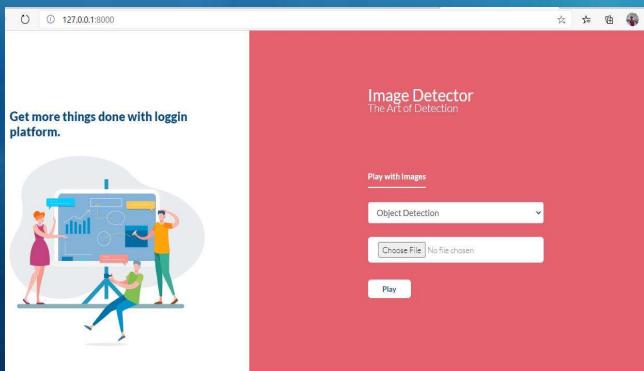


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## CONCLUSION

The goal of this project is to design an all purpose application using various ways of image processing and object detection. Going through different options available, the program will be capable of color recognition, face detection, human counting, and image recognition.

For future work, we can conduct a more thorough test of our matching algorithm using larger dataset and more rigorous diagnostics of the algorithm.



In our daily life we come across different types of image processing. The best example of image processing in our daily life is our brain sensing a lot of objects/images when we see images with eyes and processing is done in very less time

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Thank you for  
listening

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