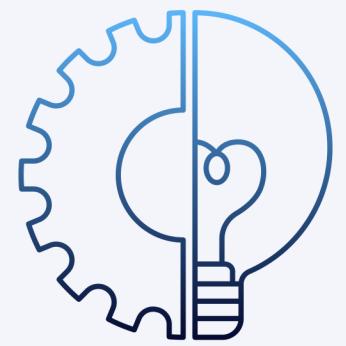


CS3011

Artificial

Intelligence

HUMAN POSE-DETECTION

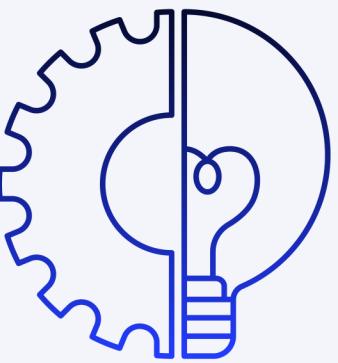
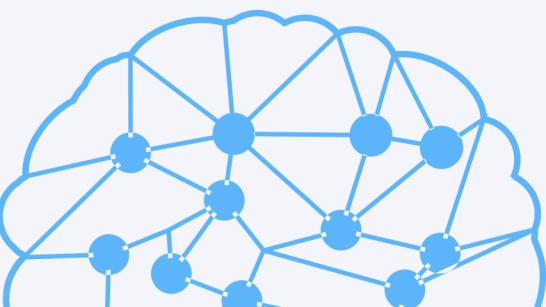


POSE DETECTION

- it is a way of identifying and classifying the joints in the human body
- It comes in computer vision that includes detecting, and associating semantic key points
- it finds applications in a wide range of fields including gaming, healthcare, AR, etc.....
- Help an employee file their expenditure report by giving them a kind reminder

DIFFICULTIES

- variation of body types
- complicated background
- Depth ambiguities



Approaches

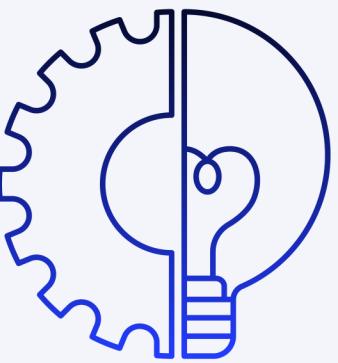
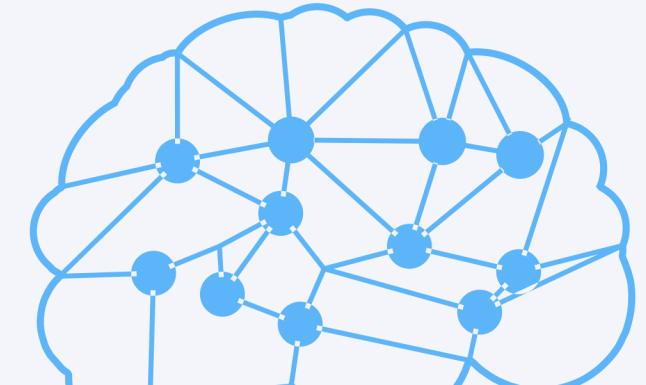
volume-based model



Planar based model



Skeleton based model

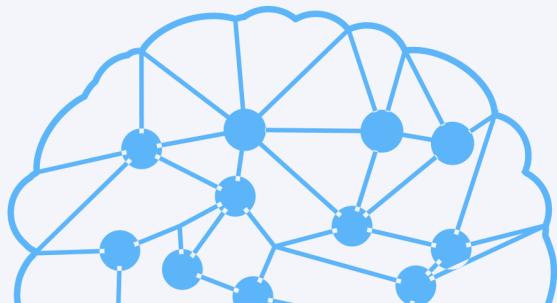
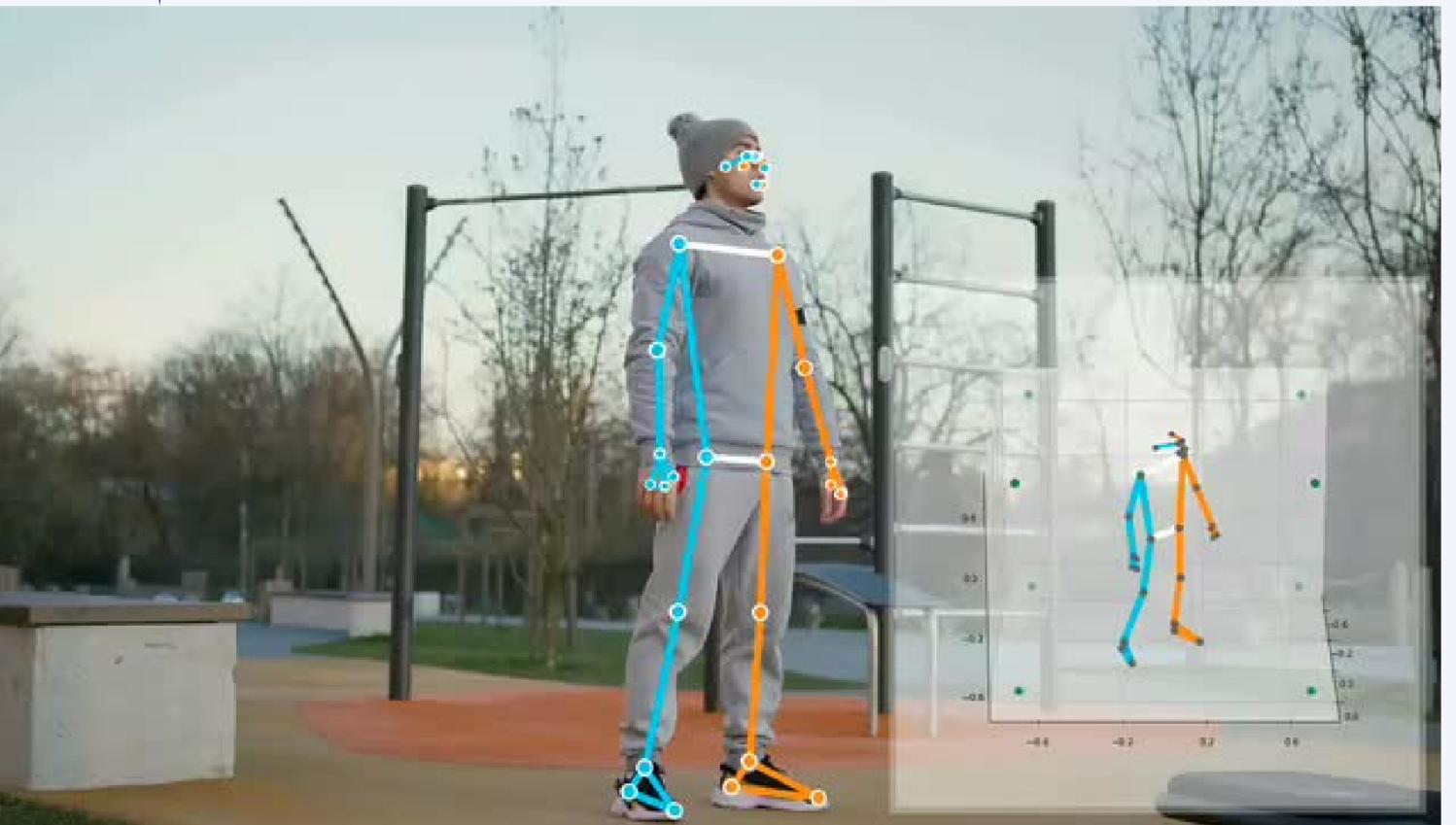


Skeleton Based Model

Mediapipe approach uses skeleton base model to detect the pose

- Also known as the kinematic model, this representative includes a set of critical points like ankles, knees, shoulders, elbows, etc...

this flexible and intuitive human body model comprises the human body's structure and is frequently applied to capture the relations between different body parts



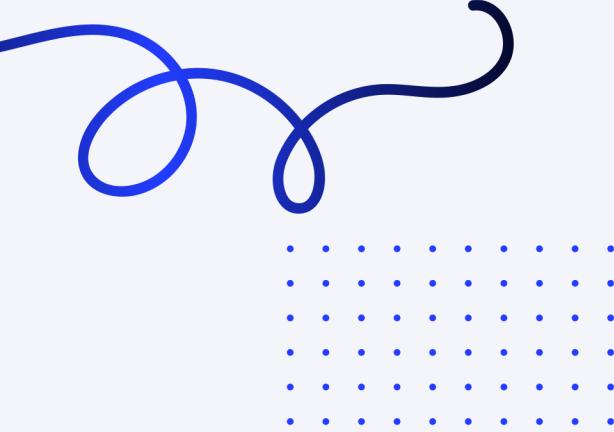
Approaches

There are several models present to perform pose estimation , each of them use different approach

- 01** Open pose
- 02** Pose net
- 03** Blaze pose
- 04** Deep pose
- 05** Deep cut

Choosing

- Choosing any one model over another may totally depend upon the application, factors like time, size of the model and ease of implementation etc....



Technologies



01

we're using Blaze pose

02

implemented using
Media Pipe framework

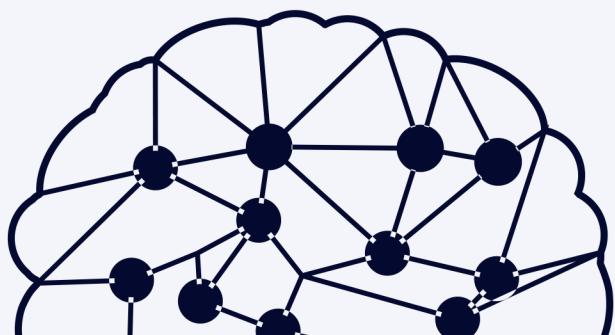
03

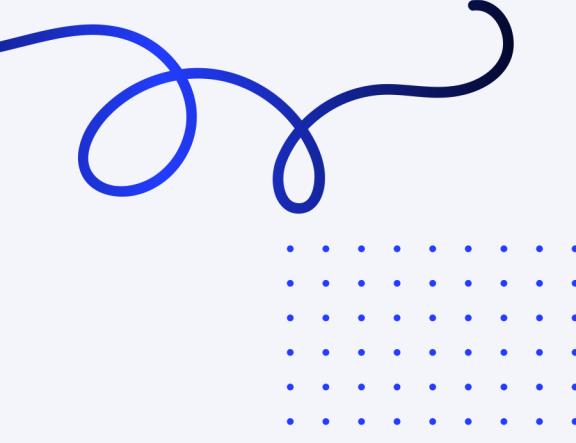
The data set used is
Objectron data set

04

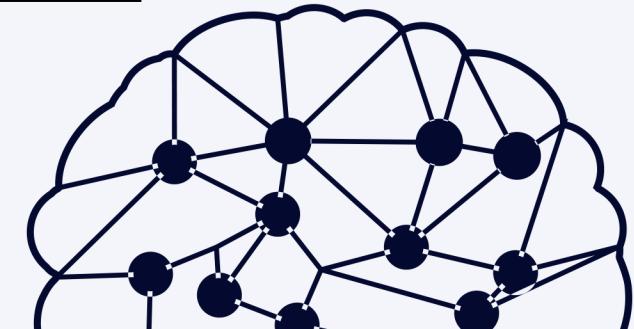
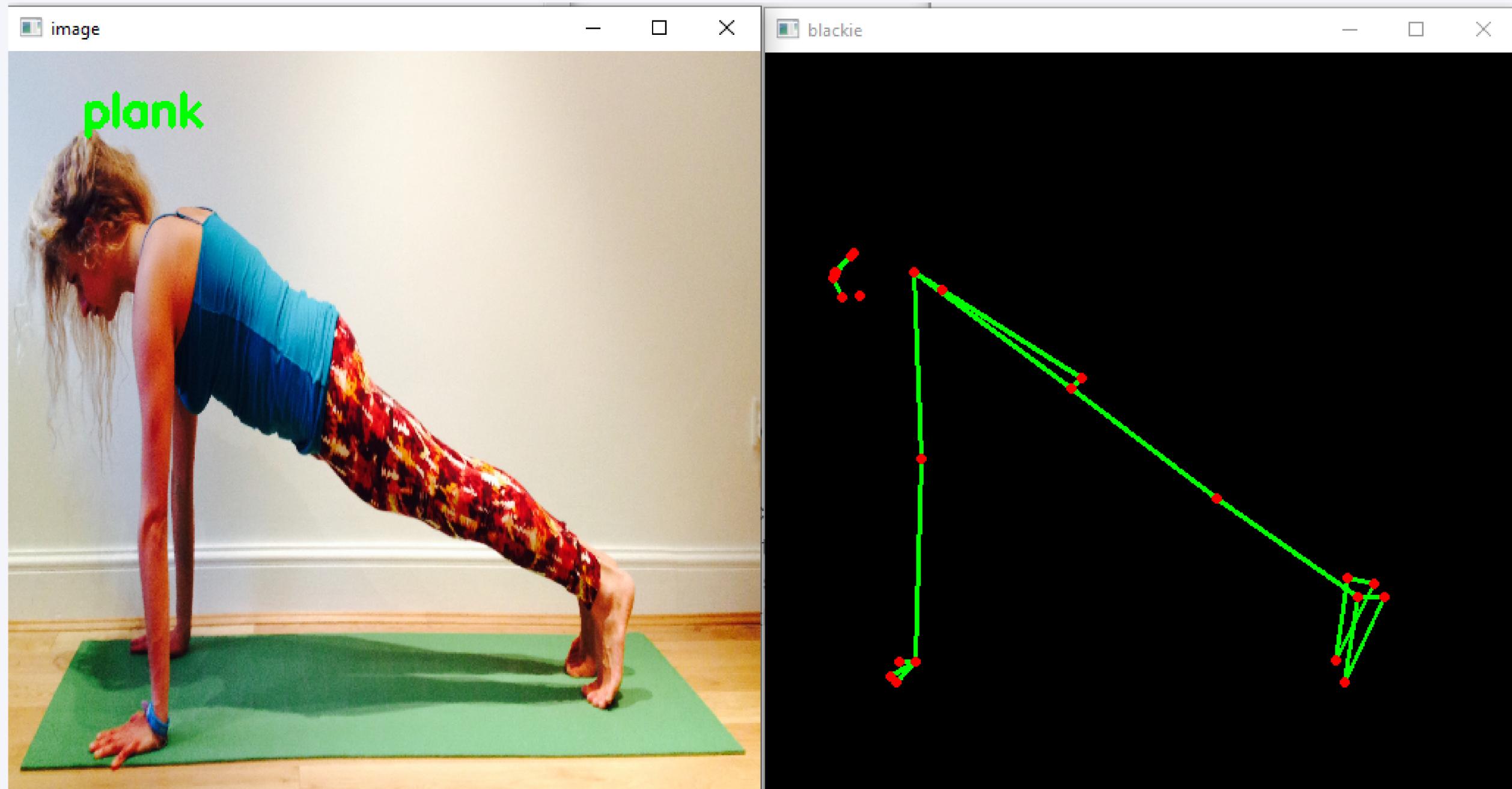
It uses 2 step pipe-line
approach

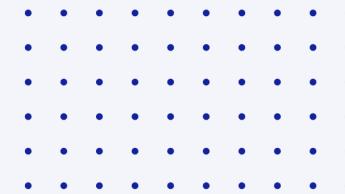
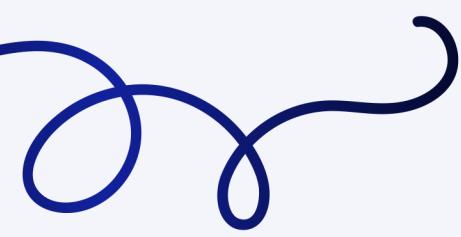
**It is not just limited to pose detection but to face
detection, multi-hand tracking, hair segmentation, object
detection, and tracking, and so on**





Result





Thank you

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20bec042 - Gurram Sai Eesha**

