EXERCISE COUNTER USING MEDIAPIPE HUMAN POSE ESTIMATION AND OPENCV

MIZBA 20BCE1004

METHODOLOGY

IMPORTING RELEVANT PACKAGES AND INITIALIZING MEDIAPIPE INSTANCES

INITIALIZING COUNTER AND STAGE VARIABLES

CAPTURING LIVE CAMERA FEED USING OPENCV AND CREATING A LOOP OF FRAMES

ANGLE FUNCTION THAT CALCULATES ANGLE IN RADIANS USING X AND Y COORDINATES OF KEYPOINTS

CAPTURING LIVE CAMERA FEED USING OPENCV AND CREATING A LOOP OF FRAMES FOR WHICH:

- CONVERT BGR TO RGB FORMAT (RECOLORING)
- MAKE DETECTIONS
- CONVERT RGB TO BGR FORMAT (RECOLORING
- EXTRACT THE LANDMARKS (AS PER GIVEN 33 KEYPOINTS)
- GET COORDINATES OF RELEVANT LANDMARKS
- BUILD LOGIC TO DETECT TASK COMPLETION
- CALCULATE ANGLES BETWEEN THE LANDMARKS
- RENDER THE DETECTIONS AND DISPLAY THE SAME ON LIVE FEED
- VISUALS ON LIVE FEED: DISPLAY THE COUNTER BOX AND VALUE; DISPLAY THE ANGLE VALUES IN REAL TIME
- CLOSE CAMERA BY HITTING Q