

INDIAN INSTITUTE OF INFORMATION TECNOLOGY NAGPUR

COMPUTER VISION PROJECT

PROJECT – VIRTUAL DRAG AND DROP

ROLL NO. – BT19ECE052,BT19ECE66,BT19ECE63

ABSTRACT

WE USED TO DO WORK LIKE THROWING TO PICKING AND IS INBARDED IN OUR DAILY LIFE . BUT WHAT IF YOU CAN PICK THINKS , PUT THINGS , THROW THINGS WHICH REALLY DON'T EXIST SEEMS LIKE MIRALE , BUT NOTHING IS IMPOSSIBLE IN THE PACE OF GROWING TECHNOLOGICAL INOVATIONS AND ADVANCENMENT IT'S POSSIBLE LETS CHECH OUT .



MOTIVATION

THE GROWING CRAZE OF ARGUMENTED REALITY IS THE MAIN SOURCE OF MOTIVATION OF OUR GROUP , AS THE IPHONE IS INEGRATED WITH AR EXPERIENCE , BRINGING THE AR EXPERIENCE INTO NORMAL PC'S IS THE GUIDING FORCE FOR THIS PROJECT



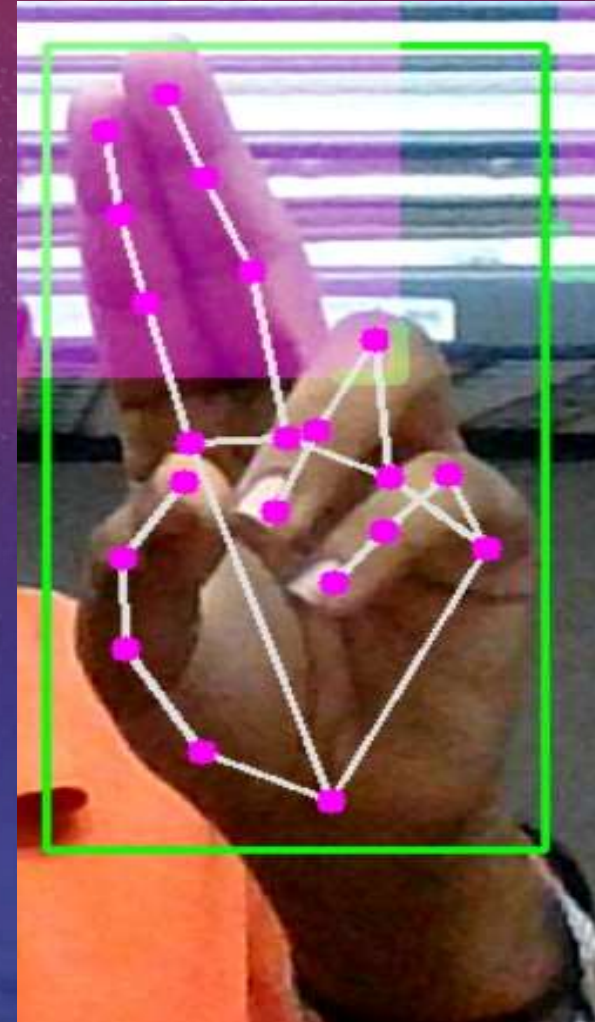
SIMILAR EXISTING TECHNOLOGY

- AR VIRTUAL EXPERIENCE IN IOS
- NEWLY DEVELOPED GLASSES
- TECHNOLOGY OF VIRTUAL DRAG DROP IS USED IN VARIOUS DOMAIN LIKE IN MEDICAL , INDUSTRIAL AREA MAINLY FOR TRAINING PURPOSE



SPECIALITY OF OUR PROJECT

USUALLY IN ALL THE VIRTUAL EXPERIENCE WE USE ANY EXTERNAL DEVICE FOR MOVEMENT DETECTION OR ANY COLOR DETECTOR FOR THE COORDINATE DETECTION , BUT WE TRIED THE HAND DETECTION IN SKELETON FORMAT WHERE BY FURTHER CALCULATIONS WE PERFORMS THE REQUIRED ACTIONS WITHOUT ANY EXTERNAL DEVICE OR COLOR INDICATOR THUS CAN BE USED WITH ANY BACKGROUND



REQUIREMENTS AND EXTERNALS

- CVZONE
- MEDIAPIPE
- HANDDETECTION
- OPENCV



ALGORITHM STEP OF PROJECT

STEP 1 – FIRST USING CVZONE WE WILL DETECT THE SKELETON FORMAT OF FINGERS.

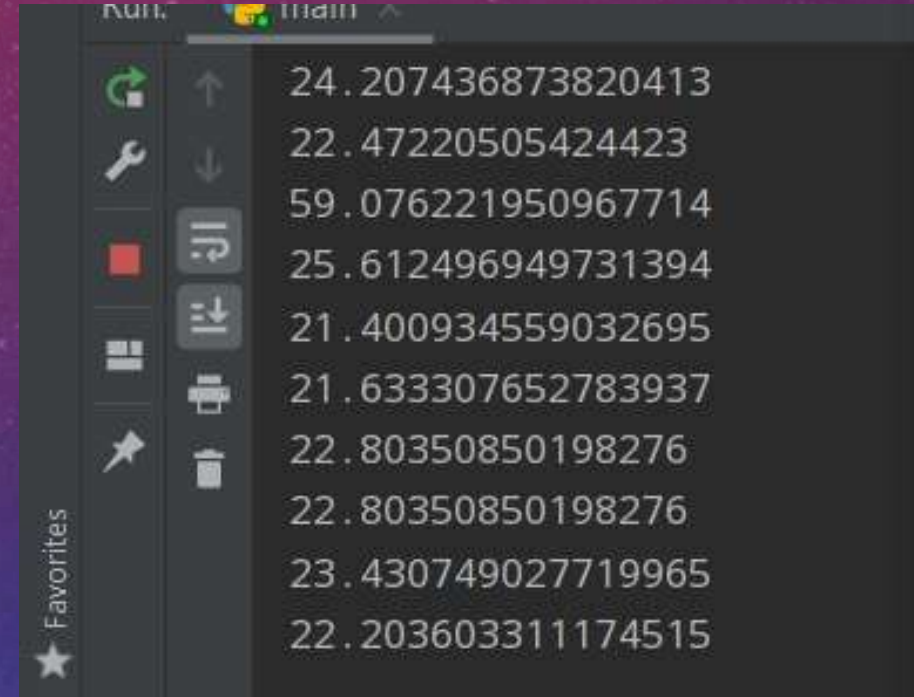
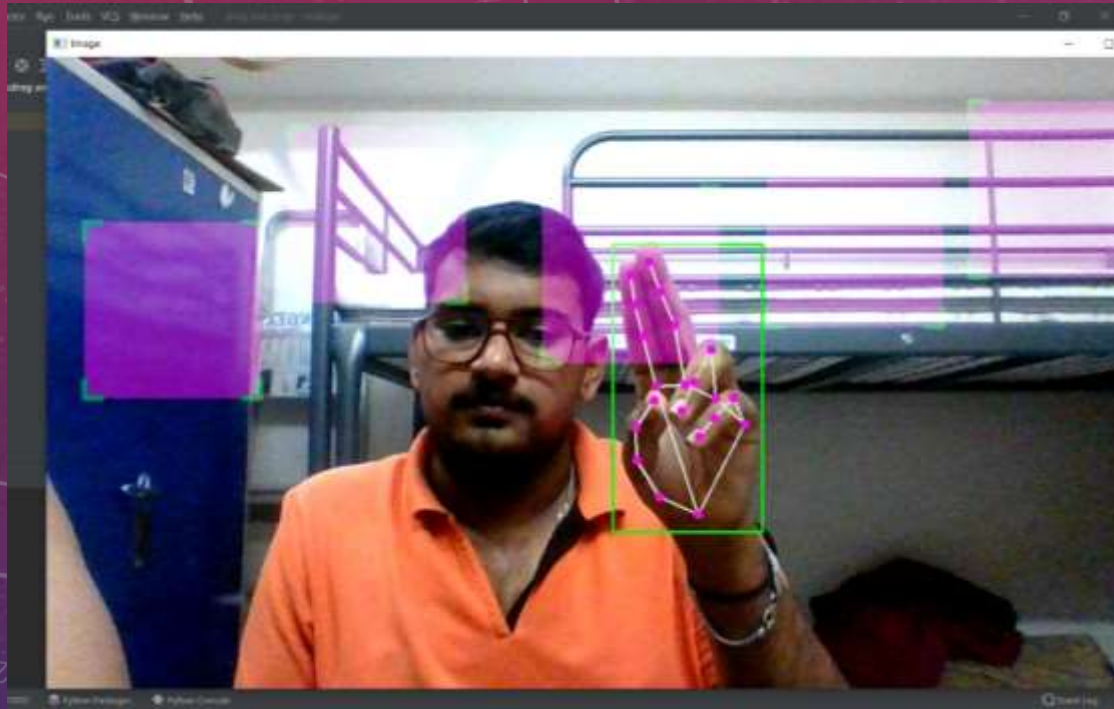
STEP 2 – NOW WE ARE PLACING THE RECTANGLES USING OPENCV .

STEP 3 – FOR SELECTING OR PICKING WE ARE DETECTING THE DISTANCE BETWEEN TWO FINGER AND IF THE DISTANCE IS BELOW 30 UNITS IT WILL PICK THE RECTANGLE

STEP 4 – NOW WITH CHANGE IN THE POSITION OF THE FINGERS THE COORDINATED IS COPIED WITH THE RECTANGLE AND IS MOVED FROM ONE PLACE TO OTHER .

STEP 5 – AS THE DISTANCE BETWEEN THE TWO FINGERS IS ABOVE 30 THE INSTANTENEOUS POSTION OF THE RECTANGLE IS FIXED .

GLIMPSE OF THE PROJECT



HAND TRACKING AND BOX MOVEMENT

RECORDED COORDINATE

OBSERVATION :



THE PROJECT WAS WORKING AS PLANNED ,
THE BOXES WERE SMOOTHLY PICKED UP .
HOWEVER THERE ARE ERROR IN TRACKING DUE
TO LACK OF LIGHT OR RARELY DUE
BACKGROUND INFLUENCE .

THE IDEA CAN BE FURTHER MODIFIED WITH
THE PICTURE OR 3D OBJECTS INSTEAD OF
BOXES .