

TrackMe



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The Algorithm:

THE IDEA BEHIND OBJECT TRACKING IS BIG AND VAST.

IN OUR PROJECT WE WANTED TO USE AN AFFECTIVE BUT NOT TOO COMPLEXED ALGORITHM.

WE DECIDED TO USE GAUSSIAN FILTERING FOR COMPARING PIXELS IN TWO PICTURES AND THEN GETTING THE CONTOUR AREA OF THE MOVING OBJECT AND PLACE A RECTANGLE ON THEM.

Gaussian filter:

GAUSSIAN FILTER METHOD WILL GET A PICTURE CONVERT IT TO GREYSCALE AND COMPARE ALL PIXELS TO THE PREVIOUS PICTURE.

IF WE WOULD FIND CHANGES IN PIXELS WE WILL RECORD THAT, IF THE GROUP OF CHANGED PIXELS IS HIGHER THAN SELECTED VALUE AREA THE AREA WILL BE COVERED WITH A GREEN RECTANGLE

Problems to overcome:

THE MAIN ISSUE WITH USING ANY KIND OF ALGORITHM TO TRACK MOVING OBJECT IS THE SIZE OF THE OBJECT IN THE VIDEO, IF AN OBJECT IS GETTING TOO FAR AWAY THE ALGORITHM MAY NOT IDENTIFY IT. FOR THAT REASON WE ADDED THE SET VALUE OPTION IN ORDER TO OVERCOME DIFFERENT VIDEOS, THE IDEA IS THAT THE LOWER THE VALUE IS THE SMALLER THE MOVING OBJECT CAN BE WHILE STILL BE RECOGNIZED BY THE APPLICATION