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Project Work-II

Object Tracking Using HOG & SVM

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Abstract:-

Histogram of Oriented Gradients is a feature descriptor used in computer vision & image processing for the purpose of object detection. The technique counts occurrences of gradient orientation in localized portion of an image. This method is similar to edge orientation histograms, but differs in that it is computed on a dense grid of uniformly spaced cells & uses over lapping local contrast normalisation for improved accuracy.

SVM or Support Vector Machine is a classifier used for classification. SVM with a single kernel is used in this project.

In this paper, for the purpose of tracing and tracking, Radial Basis Function (RBF) Kernel is used. The VTD approach is effective for handling appearance variation caused by pose change, lighting, scale variation ets.

The main disadvantage, is that tracker cannot distinguish target & background patches of the entire frame.

How this paper is related to our project?

Our project tittled 'Social Distance Monitoring System for Covid 19' is an open-cv base project in which there is vast applications of image processing, Hog & SVM. How is used to detect humans/pedestrians. And SVM is used to classify th Hog matrices.

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