



**An approach for Face detection along with object using AI and Machine Learning**

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## **An approach for Face detection along with object using Machine Learning**

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Face recognition has been a rapidly growing and intriguing region progressively applications. A huge number of face recognition calculation have been produced in a long time ago. In this paper, for face detection we are using HOG (Histogram of oriented Gradient) based face detector which gives more accurate results rather than other machine learning algorithms like Haar Cascade. In recognition process we are using CLAHE (Contrast Limited Adaptive Histogram equalization) for preprocessing than we are using HOG which is a standard technique for features extraction. HOG features are extracted for the test image and also for the training images. And finally for classification we are using SVM (support vector machine). SVM will classify the HOG features. Preprocessing technique is use to remove the noise, contrast enhancement, and illumination equalization. The result of this paper show the liability and productiveness in better face recognition performance.

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