

# Review of Face Detection using HAAR Cascade with Static and Live Detection Functionality

Trupti A. Dhumal<sup>1</sup>, Sanskruti R. Paitwar<sup>2</sup>, Gauri D. Palve<sup>3</sup>, Vaishnavi Jagnade<sup>4</sup>, Pallavi Heble<sup>5</sup>

Professor, Department of Computer Science Engineering<sup>1</sup>

UG Scholar, Department of Computer Science Engineering<sup>2,3,4,5</sup>

SVERI's College of Engineering, Pandharpur, India

**Abstract:** Human facial recognition is characterized as a method of identifying facts or affirmations of a test personality. Face recognition is available for PC devices with some implementation that can recognize faces in images. Usually face recognition is achieved by using the "correct" data from the frontal photo. While there are often enough cases where a full frontal cannot be obtained, a working example is a defective face from a CCTV camera. The three stages of the proposed face recognition method include a face data collection (FDG) process, a training stored image (TSI) stage, a face recognition using a local (FRUL) binary pattern histogram (LBPH) algorithm, and the classification calculation has been divided into four stages by the division test.

**Keywords:** Face Detection, Haar Cascade, Viola-Jones Algorithm, OpenCV, Integral Image, etc.

## REFERENCES

- [1] [https://www.hindawi.com/journals/jece/2016/4645971/?msclid=59ce496221f013ade5102bfa5db9299b&utm\\_source=bing&utm\\_medium=cpc&utm\\_campaign=HDW\\_MRKT\\_GBL\\_SUB\\_BNGA\\_PAI\\_DYNA\\_JOUR\\_X\\_PJ\\_GROUP3&utm\\_term=%2Fjournals%2Fjece%2F&utm\\_content=JOUR\\_X\\_PJ\\_GROUP3\\_JECE](https://www.hindawi.com/journals/jece/2016/4645971/?msclid=59ce496221f013ade5102bfa5db9299b&utm_source=bing&utm_medium=cpc&utm_campaign=HDW_MRKT_GBL_SUB_BNGA_PAI_DYNA_JOUR_X_PJ_GROUP3&utm_term=%2Fjournals%2Fjece%2F&utm_content=JOUR_X_PJ_GROUP3_JECE)
- [2] <http://eyalarubas.com/face-detection-and-recognition.html#:~:text=The%20difference%20between%20face%20detection%20and%20recognition%20is,a%20face%2C%20which%20we%20recognize%20as%20President%20Obama.>
- [3] <https://www.javatpoint.com/face-recognition-and-face-detection-using-opencv#:~:text=Face%20recognition%20and%20Face%20detection%20using%20the%20OpenCV,can%20quickly%20identify%20the%20faces%20without%20much%20effort.>
- [4] <https://www.geeksforgeeks.org/face-detection-using-python-and-opencv-with-webcam/>