

# Supervised Machine Learning Techniques based Human Age, Gender and Emotion Detection

Anup Bhang<sup>1</sup>, Ankush Sondal<sup>2</sup>, Mansi Chandel<sup>3</sup>, Vishal Mishra<sup>4</sup>, Bipul Ranjan<sup>5</sup>, Harsh Gupta<sup>6</sup>

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

UG Student, Department of Computer Science and Engineering<sup>2,3,4,5,6</sup>

KDK College of Engineering, Nagpur, Maharashtra, India

**Abstract:** *The proposed work is “Supervised machine learning based Human Age, Gender and Emotion Detector” is a project to help people avoid being victims of frauds. Automated age and gender detection has been generally used in our daily lives that we come across, majorly in a person to computer interaction, visual surveillance, biometric analysis, electronics and other applications of commercial use. By recognizing the emotions of a person, we can improve the recommendation system. The existing methods have quite satisfying performance on real-world images if facial expressions of input image is neutral or calm, it lacks significantly in age prediction when facial expressions are altered. For image classification, a convolutional neural networks (CNNs) pre-trained are used on ImageNet from Caffe, a modifiable platform for state-of-the-art deep learning algorithms and a set of reference models. The YOLOv3 (You Only Look Once V3) algorithm was employed for such purposed having a desirable ability to serve the required purpose.*

**Keywords:** Age detection, Gender Detection, Emotion Detection, CNN, YOLOv3 Algorithm

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