

DEPARTMENT OF DATA SCIENCE

III-II CSD-B Industrial Oriented Mini Project

A.Y. 2024-2025

Date: 07-02-2025

Domain / Areas	Computer Vision & Deep Learning
Title of the Project	REAL-TIME GENDER AND AGE CLASSIFICATION USING DEEP LEARNING AND OPENCV
Team Leader Name	1. K. Purna Vamsi
Team Members Name with Roll No	2. B. Chandrashekar
	3. G. Sai Teja
Guide Name	Dr. D.Jyothi
Guide Signature	
<u>ABSTRACT:</u> In the era of artificial intelligence, computer vision plays a crucial role in human-centric applications. This project focuses on face detection, age estimation, and gender classification using deep learning models. It utilizes OpenCV's DNN module and pre-trained Caffe models to analyze facial features from images or video streams. The system accurately detects faces, classifies gender as male or female, and predicts age into predefined categories. By leveraging convolutional neural networks (CNNs), the model processes facial attributes with high accuracy. This technology finds applications in biometric security, personalized marketing, social media enhancements, and smart surveillance systems. The project ensures efficient real-time processing, making it suitable for embedded AI systems. Additionally, the model can be improved with advanced datasets and transfer learning techniques. With potential integration into retail, healthcare, and smart applications, this system enhances automation and user interaction. Future enhancements could involve more precise age group classification and diverse dataset training for improved performance.	
Software/Hardware Needs	Python 3.x, OpenCV, Caffe Framework, NumPy, PyCharm, Webcam.

Signature of the Project Coordinator

Signature of the HOD(CS&DS)