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(71)**Name of Applicant :**
1)Dr. D.Magdalene Delighta Angeline
Address of Applicant :Associate Professor, Department of CSE, Joginpally B.R.Engineering College, Hyderabad, India ---------- ----------
2)Dr. T.Prabakaran
3)Dr. I.Samuel Peter James
Name of Applicant : NA
Address of Applicant : NA
(72)**Name of Inventor :**
1)Dr. D.Magdalene Delighta Angeline
Address of Applicant :Associate Professor, Department of CSE, Joginpally B.R.Engineering College, Hyderabad, India ---------- ----------
2)Dr. T.Prabakaran
Address of Applicant :Associate Professor, Department of CSE, Joginpally B.R.Engineering College, Hyderabad, India. ---------- ----------
3)Dr. I.Samuel Peter James
Address of Applicant :Associate Professor, Department of CSE, Shadan Women's College of Engineering and Technology, Hyderabad, India. ---------- ----------

(57) Abstract :
REAL-TIME STUDENT ATTENDANCE CAPTURING WITH FACIAL RECOGNITION FROM SURVEILLANCE VIDEO USING CONVOLUTIONAL NEURAL NETWORK Face recognition has been an active and vital topic among the computer vision community playing an increasingly important role in modern life and has been widely used in residential security, face authentication, and criminal investigation. Most techniques process visual data and search for general patterns in human faces. Ever since computers were developed, scientists and engineers thought of Artificial intelligence systems that are mentally and/or physically equivalent to humans. In the past decades, the increase of generally available computational power provided a helping hand for developing fast learning machines, whereas the internet supplied an enormous amount of data for training. These two developments boosted the research on smart self-learning systems, with neural networks among the most promising techniques. This students' attendance capturing system uses a Convolutional Neural Network (CNN) algorithm a special type of deep learning Neural Network that is mainly used for image classification tasks. The image recognition performance of the system is improved with Convolutional Neural Network architecture that solves the facial image-related problems that certain varying illumination, poses, occlusion, and facial expressions. CNN shows an important improvement in attendance management technology, offering a solution that addresses societal needs for efficient and accurate identification. With CNN, this attendance capturing system shows the prospective to transform traditional methods of attendance tracking in educational settings. By overcoming limitations related to conventional techniques, such as manual data entry and inaccuracies in identification, this system offers a modernized approach to attendance management. FIG.1

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