**Smart Automated Group Attendance and Personalized ERP Management System**

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**Abstract**

Major and most of the systems in the world by today are in the way of systematic automation through machines or by Artificial Intelligence, in order to achieve high efficiency with low cost and also long lasting. The major change in today’s world in making machines to automate the attendance system through the approach of Deep Learning techniques. Some institutions are still using the native approach of making the attendance which is still a time spanning process in this era. Taking that as a concern, this work makes that way in such a way that it automates the whole process by using the various Deep Learning technologies. In this approach we have created a model with the help of pretrained model Facenet which classifies the faces of individuals that is extracted from a group photo with the help of induced VGG16 and Densenet and are used to make the prediction of those faces of the individuals. The model is already trained using enough pictures of each and every individual not necessarily more than 5 pictures for each of them at initial stage. The extracted faces from the group photo are enhanced using various Computer Vision techniques as the pixels were broken while extracting those pictures. After enhancement, these images are used for the prediction purpose.