

Age and Gender Recognition Using Convolutional Neural Network

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Abstract: Age and gender recognition from facial images is a challenging task with various real-world applications. In this project, we propose a Convolutional Neural Network (CNN) based approach for accurate and efficient age and gender recognition. Our goal is to develop a model that can robustly estimate the age and gender of individuals from facial images, considering factors such as variations in lighting conditions, facial expressions, and aging patterns. To achieve this, we leverage a large-scale dataset containing annotated facial images with age and gender labels. We preprocess the images to enhance their quality and extract relevant facial features. We design a CNN architecture that can effectively learn discriminative representations from the input images and make accurate predictions. We employ techniques such as data augmentation and transfer learning to improve the generalization capability of our model. We train and validate our CNN model using a subset of the dataset, carefully considering the training parameters and optimization techniques. We evaluate the performance of our model on a separate test set, measuring metrics such as accuracy, precision, recall, and F1-score. Furthermore, we compare our results with existing state-of-the-art methods to demonstrate the effectiveness of our approach.

Keywords: Age and gender recognition.

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