World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:14, No:12, 2020

Clothes Identification Using Inception ResNet V2 and MobileNet V2

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Abstract : To tackle our problem of clothes identification, we used different architectures of Convolutional Neural Networks. Among different architectures, the outcome from Inception ResNet V2 and MobileNet V2 seemed promising. On comparison of the metrices, we observed that the Inception ResNet V2 slightly outperforms MobileNet V2 for this purpose. So this paper of ours proposes the cloth identifier using Inception ResNet V2 and also contains the comparison between the outcome of ResNet V2 and MobileNet V2. The document here contains the results and findings of the research that we performed on the DeepFashion Dataset. To improve the dataset, we used different image preprocessing techniques like image shearing, image rotation, and denoising. The whole experiment was conducted with the intention of testing the efficiency of convolutional neural networks on cloth identification so that we could develop a reliable system that is good enough in identifying the clothes worn by the users. The whole system can be integrated with some kind of recommendation system.

Keywords : inception ResNet, convolutional neural net, deep learning, confusion matrix, data augmentation, data preprocessing
Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development
Conference Location : Chicago, United States
Conference Dates : December 12-13, 2020