EXPLORING SKIN LESION CLASSIFICATION THROUGH EXPLAINABLE AI - LEVERAGING CAM FOR INTERPRETABILITY

Advancements in the field of AI and ML have had a great impact on the field of healthcare and automating medical assistance. Yet the underlying skepticism prevails in the usage of such technology in such a field as it has hithered to been handled by professionals of the field. Hence the advent of Explainable Artificial Intelligence(XAI) assumes significance in this context. The proposed work aims at tackling such a problem in the context of skin lesion classification using XAI techniques such as CAM to provide an understanding of the prediction made by the model which has been trained on the HAM-10000 dataset. Using data augmentation techniques the Mobile Net model has been trained leading to better results than the original dataset in early detection of the seven conditions of skin lesions. Using CAM the image is visualized with an overlay of the heat map resulting in the prediction of the model hence aiding in understanding the result better and generating a factor of trust towards the machine's predictions.

Keywords: Machine learning, Explainable Artificial intelligence, skin lesion classification, data augmentation, CAM