Detection of Skin Cancer using Convolutional Neural Network

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Abstract: *Due to their great complexity, expensive diagnosis, and subjective human interpretation, dermatological illnesses are one of the severe health challenges of today. When there are fatal illnesses like melanoma, which have a tendency to slowly spread throughout the body, they are best diagnosed in their early stages because this increases the likelihood of a successful treatment. Malignant melanoma, another name for melanoma, is the worst type of skin cancer and the cause of 75% of deaths from the disease. In 2022, it is anticipated to rank as the fifth most typical cancer for both males (57,180 instances) and women (42,600 cases). It's essential due to the high mortality rate connected with melanoma to find the first signs so they can be properly and quickly addressed. Skin biopsies are still used to diagnose skin cancer, however studies reveal that using new computer technologies like image processing mechanisms in processes connected to early diagnosis of this malignancy can enable discovery at an early stage that may heal the patient. The suggested model is built using a Convolutional Neural Network in conjunction with image processing software to create a better structure and increase accuracy. Phases involving data collection and preprocessing, CNN model creation, and detection make up our model's design. Early diagnosis will be aided by this, especially with the set photos of lesions on the skin. Skin cancer can be detected and can be distinguished from benign skin cancer and melanoma using lesion features including symmetry, colour, size, form, etc. When the model has been trained using the dataset of melanoma lesion images, user input data is handled. The user is presented with the results as high or low risks, and melanoma may be treated early on with little surgery.*

Keywords: Melanoma, Machine Learning, Convolutional Neural Network(CNN), Web application

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