**ABSTRACT**

**IEEE BASE PAPER ABSTRACT:**

Skin cancer is the one of ten most common cancer types in the world. The abnormal growth of skin cells most often develops on the skin exposed to the sun. Skin cancer occurs when errors occur in the DNA of skin cells, it begins at the top of the skin. There are three types of skin cancer they are 1. Melanoma 2. Basal cell Carcinoma 3. Squamous cell skin cancer. The mutation causes the cells to grow out of control and form a mass of cancer cells. Melanoma is the most dangerous skin form of skin cancer when compared to the other types. The main symptom of skin cancer is a mole are other growth on our skin. Skin cancer symptoms include darker looking skin yellowish and eyes reddened skin, itching and excessive hair growth. There is proper technique followed to reduce the skin cancer by limiting or avoiding exposure to ultraviolet (UV) radiation. Detection of skin cancer at an earlier stage can increase the survival rate. When compared to the ancient days the rate of skin cancer peoples is increased significantly, due to modern techniques and lifestyles, direct exposure to harmful UV radiation from sun. It was estimated that in the year 2022 around 57,180 men’s and 42,600 women’s would develop Melanoma of skin.

In the case of positive skin cancer, determining the type is very important because it helps to identify the most suitable treatment. In recent times the usage of image processing and mission vision in the field of health care and medical applications is increasing at a great face. In this paper we are using the convolution neural network (CNN) to detect and classified the clause of cancer based on historical data of clinical images using RESNET.

**OUR PROPOSED ABSTRACT:**

Skin cancer is a prevalent and potentially life-threatening disease that affects the skin's outer layers. Promoting awareness about skin cancer, its risk factors, and the significance of early detection can play a pivotal role in combating this disease and reducing its impact on individuals and communities worldwide. In this project, we present a novel application of deep learning techniques for the early detection of skin cancer using dermatoscopic images. The main objective of this research is to develop an accurate and reliable model to predict various types of skin cancer, namely Actinic keratoses and intraepithelial carcinoma (akiec), basal cell carcinoma (bcc), benign keratosis-like lesions (bkl), dermatofibroma (df), melanoma (mel), melanocytic nevi (nv), and pyogenic granulomas and hemorrhage (vasc). The project is implemented using Python, and the core algorithm/model employed is the Convolutional Neural Network (CNN) architecture. CNNs are particularly suited for image classification tasks due to their ability to automatically learn relevant features from the data. Leveraging the power of CNNs, our model is trained on the HAM10000 ("Human Against Machine with 10000 training images") dataset, which consists of 10015 high-resolution dermatoscopic images sourced from diverse populations and acquired through various modalities. The achieved results demonstrate the efficacy of our proposed approach. The model achieved an impressive training accuracy of 96.00% and a validation accuracy of 97.00%. These high accuracy rates signify the potential of our deep learning-based skin cancer prediction system as a reliable tool for early diagnosis, thereby aiding healthcare professionals in making informed decisions and improving patient outcomes. By contributing to the field of dermatological research and machine learning, our project provides valuable insights into the application of deep learning techniques for skin cancer prediction. Furthermore, the publicly available HAM10000 dataset, enriched with a wide range of dermatoscopic images, can serve as a valuable resource for academic research and further advancements in the domain of medical image analysis and classification.