

**Abstract**—Skin disease is a common health problem throughout the world which is one of the main causes of global disease. Skin and subcutaneous diseases managed to contribute 1.79% of global diseases and also became the fourth leading cause of the burden of non-fatal diseases and disability in 2013. Indonesia was ranked 29th out of 195 countries in Asia which indirectly contributed to in contributing to the transmission of skin diseases due to several causes such as lack of access to health care services, poor hygiene conditions, and also population density. Based on the information revealed in the book entitled illustrated guide on various skin diseases commonly found in Indonesia, it is stated that skin diseases ranging from herpes, ringworm, chickenpox, scabies, to psoriasis are often found in Indonesia. With current technological advances, it is possible for humans to be able to recognize various skin diseases with the help of the Convolutional Neural Network (CNN) Method. A total of 1203 images containing types of skin diseases such as herpes simplex, pityriasis, psoriasis, tinea corporis, scabies, and also vitiligo will be a class in the classification process, but because most images are still unbalanced and do not have strong object elements, it is necessary to do this. data preparation and data balancing is also needed so that the architectural model will not be difficult to learn. By using k-fold cross validation and carrying out the ensemble method, the results of the model evaluation will be in the form of an accuracy matrix where the results of each model will be compared and it will be determined which model is the best based on the results obtained. The test results that produce Cross Validation show that the RGB image is superior where the accuracy value obtained is 49% and the Grayscale image has an accuracy of 47%. however, when compared with the ensemble results, Grayscale images have superior accuracy results, namely the accuracy results are 93% and RGB images produce only 86.

**Keywords:** Image Detection, Skin Disease, Machine Learning, Convolutional Network