**SKIN CANCER DETECTION AND CLASSIFICATION USING MACHINE LEARNING**

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**N11/3/1171/015**

**A Project Thesis submitted to the Department of Computing and Informatics for Partial Fulfillment of the Requirements for Bachelor of Science in Computer Science of Laikipia University.**

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# DECLARATION

I hereby declare that this research thesis is my creative and original work and has not been submitted to any other university for the purpose of academic award. Any information is given in this entire documentation and all the relevant sources are quoted and acknowledged accordingly.

**Signature ………………………………… Date …………………………….**

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**N11/3/1171/015**

# RECOMMENDATION

The Project Thesis entitled “SKIN CANCER DETECTION AND CLASSIFICATION USING MACHINE LEARNING‟ written by **Ndichu John Kamau** is presented to the Department of Computing and Informatics of Laikipia University.

We have reviewed this thesis and recommended it be accepted in partial fulfillment of the requirements for the Bachelor’s Degree in Computer Science.

**Signature ……………………………………… Date …………………………….**

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# DEDICATION

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# ABSTRACT

Skin cancer is the a deadliest type of cancer as it affects a vital and the largest organ in a human body. The best part of it is, if detected early skin cancer can be treated and cured. The major drawback to early detection is that, it’s only expert dermatologists who are not readily available can be able to perform skin cancer diagnosis and classify the type of skin cancer. Sometimes, these dermatologists fail to offer the right diagnosis and hence providing wrong medication to the patient.

My paper proposes a skin cancer detection and classification solution based on Image Processing and Deep Learning techniques. This solution is deployed online so it’s available everywhere over the internet even in the remote areas. The patient needs to provide an image of the affected area on the skin as the input to the model for processing. This image is then processed by the Image Processing and Deep Learning techniques in the application and an accurate output is provided to the patient. The output has the details about the type of skin cancer and details about it.

I’m comparing two different algorithms for real time skin cancer detection based on accuracy. The algorithms used are SVM (Support Vector Machines) and Naive Bayesian Classifier.

Keywords: Skin cancer detection, Image processing, Deep Learning.