

ABSTRACT

This document discusses the role of e-Health technology in the treatment of skin cancer, which is one of the most common types of cancer in Indonesia. Skin cancer can cause death if not handled properly. However, skin cancer treatment is often expensive and difficult to access for people with economic limitations or access to health facilities. Therefore, the use of e-Health technology such as applications and online platforms can help overcome these obstacles by providing online doctor consultations and reducing medical costs.

In the context of e-Health, Internet of Things (IoT) applications have great potential to improve skin cancer care and everyday life. However, the use of IoT in e-Health also faces security and privacy challenges. Therefore, the use of Named Data Networking (NDN) network architecture is relevant because NDN offers better security and privacy in exchanging sensitive data.

In the end result of this project, we released an Android-based NDN e-Health skin cancer detection application with a combined website that has been integrated with the NDN network architecture. In testing, the product can be integrated properly from an Android-based mobile app, websites, machine learning, and NDNs. In the results of the tests carried out, it was found that Android with the Flutter framework obtained a GPU sampling rate of <16ms which passed the performance test for a GPU sampling rate speed in general. In viii

Machine learning the CNN method was successfully integrated to achieve an accuracy value of above 75% as a parameter for our product verification. The website that was created was successfully integrated with the NDN architecture network where the flutter that was designed can already be integrated directly with the website with a page loading speed of 2 seconds. NDN can connect with NDN-based routers and servers as well as producers. Finally, the databases that are created can all be integrated properly from Flutter, the website, and the NDN when doing Requests and Responses. Data that has been created with a 100% success rate can be integrated.

Keywords : *e-Health, NDN*