

## **Abstact**

*Melanoma skin cancer and basal cell carcinoma are very deadly types of cancer and grow in skin tissue. In recent years Machine Learning has begun to be practiced in Health, especially skin cancer. Classification is an important part in the machine learning based skin detection process. Several classifications proved to be the cause of low detection. The development of prototypes for the detection of melanoma skin cancer and basal cell carcinoma is also rarely found in the literature. The results of the evaluation of the prototype have been obtained. To solve the problem above, this final project research conducted a study on several classification algorithms on image-based melanoma skin cancer and basal cell carcinoma to improve accuracy and develop machine learning-based detection. The methods used in this research are 1. Classification analysis of Support Vector Machine, K-Nearest Neighbor, & Naive Bayes, 2. Development of an android application prototype, 3. Performance testing of the developed android application prototype. The experimental results show that the classification generated by the Support Vector Machine algorithm using K-Fold Cross Validation reaches an accuracy of 90%. On the other hand, the prototype developed has succeeded in detecting images of melanoma skin cancer, basal cell carcinoma and normal skin as a comparison.*

*Keywords: Support Vector Machine, K-Nearest Neighbor, Naive Bayes.*