

ABSTRACT

Melanoma is the most dangerous and deadly type of skin cancer. Melanoma can heal if detected early, but the problems experienced by dermatologist experts are the difficulty in distinguishing melanoma from other pigmented wounds on the skin, also to diagnose melanoma is requiring a biopsy, but conducting a biopsy requires a long preparation. These issues can make cancer cells spread more widely. In response to that problem, in this final project, an Android-based mobile application that can detect melanoma early be designed. This application is designed using an expert system with the Certainty Factor method and Support Vector Machine (SVM) image processing method. The result from the image processing method done shows that this application has an accuracy of 81.03% using a total of 180 training data. Meanwhile, the expert system with the certainty factor method is suitable for this application because the decisions taken are by the knowledge representation that has entered into the system.

Keyword: *Melanoma, Expert System, Certainty Factor (CF), Support Vector Machine (SVM)*