

**Universiti Teknologi MARA**

**Identification of Skin Disease Using Gray  
Level Co-Occurrence Matrix and Support  
Vector Machine**

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**Thesis submitted in fulfilment of the requirements for  
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## **STUDENT DECLARATION**

I certify that this report and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.



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## **ABSRACT**

Chronic skin disease such as psoriasis and eczema are two of the most common skin disease affecting the human body especially in Malaysia. These skin diseases can cause serious health and financial effects if not recognised and treated early. Early detection of disease severity, as well as advice on skincare and medicine, can help keep the condition from worsening. However, the current diagnosis might be time-consuming and expensive. Hence, this project aimed to develop automated skin disease detection focusing on psoriasis and eczema as the common skin disease in Malaysia. To accomplish this, skin disease images were pre-processed to filter and segment the image by enhancing, removing noise, and segmenting the image. Then, the method Gray Level Co-Occurrence Matrix (GLCM) was used to extract features of the skin disease images that could be obtained correctly. The identification of the skin disease is performed in the enhanced images using Support Vector Machine (SVM) classifier. A set of 20 different skin disease images were analysed and utilized, giving an overall accuracy of 90% for skin disease identification. These findings indicate that the proposed system can assist patients and dermatologist in determining the type of disease from an image of the affected region during the early stages of skin disease.

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