Universiti Teknologi MARA

Oil Palm Tree Disease Diagnosis Using Expert System

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SUPERVISOR APPROVAL

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This thesis was prepared under the supervision of the project supervisor, Sir Sulaiman bin Mahzan. It was submitted to the Faculty of Computer and Mathematical Sciences and was accepted in partial fulfilment of the requirements for the degree of Bachelor of Computer Science (Hons.).

Approved by:

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Sir Sulaiman bin Mahzan
Project Supervisor

JULY 24, 2017

STUDENT DECLARATION

I certify that this report and the project to which it refers is 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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ABSTRACT

Treatment and care of oil palm tree at plantation field is important to ensure the oil palm tree is free from any disease. However, it is an uneasy task because the smallholder has a lack of knowledge and facing difficulty in order to obtain the accurate information of oil palm tree disease in an affordable way. Besides that, the process for diagnosing the disease is also timely. To overcome the problems, this study proposes a new system for diagnosing oil palm tree disease using the expert system. The objectives of this project are to analyse the symptoms of oil palm tree disease, to develop an expert system that diagnose oil palm tree disease and to test the functionality and usability of system. Expert system method will be applied in the project due to its characteristics of high quality performance and high speed in obtaining the result. An Agile methodology will be used as a software development life cycle in this study. The propose project is expected to help the user to diagnose the oil palm disease faster and more accurately compare to diagnose manually. Besides, it able to help the developer to learn how to develop the rule to diagnose the disease, what process involved to diagnose the disease and how to apply expert system method. Based on the functionality testing conducted, it is showed that all the function in the system is success and the usability testing showed that 94% of 17 respondents satisfied with this system.

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