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Mobile Application for Car Troubleshooting Using Ruled Based Expert System

MUHAMMAD FAIZ BIN MOHD NOR

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By

MOHAMMAD FAIZ BIN MOHD NOR
2017561909

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 fulfillment of the requirements for the degree of Bachelor of Computer Science (Hons).

Approved by

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Sir Sulaiman Bin Mahzan
Project Supervisor

JANUARY 2,2020

STUDENT DECLARATION

I certify that this thesis and the project to which it refers in the product of my own work and that any idea or quotation from the work of other people, published or otherwise are fully acknowledge in accordance with the standard referring practices of the disciplines.

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MOHAMMAD FAIZ BIN MOHD NOR

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ABSTRACT

Car is one of Malaysia's most popular and commonly used by drivers. So there are many of car problems threaten this transportation. This project aims to developing mobile awareness that can classify the type of car problem based in symptoms. The solution to the problem is a mobile diagnostic application developed and the outcome efficiently. This research has three main aims: (1) to design a rule based system based on expert domain point of view for car troubleshooting (2) to develop a prototype of car troubleshooting system (3) to test functionality of the system. The system of purpose was assessed and expertise was used for the results produced in the system. Ruled based are applied in the mobile application to treat the symptoms by using the forward chaining technique. The approach is the waterfall model used for this framework. The expected result for the program has therefore been checked by uses, whose data are obtained and which findings are matched with tests from humans' experts. Five forms of car symptoms are running and the result is successful. Eventually the program built to incorporate a chaining technique will diagnose the car problem on the basis of the user's symptom. The program can be improved by updating the code and adding additional types of automobiles problem for different information.

Keywords : Car, Ruled-based, Waterfall model, Symptom, Automobile

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