Universiti Teknologi MARA

SRcS: Smartphone Recommendation System Using Genetic Algorithm

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JULY 10, 2020

STUDENT DECLARATION

I clarify that this thesis and the project to which it refers is the product of my own work and that any idea 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

The technology of smartphones has greatly influenced every facet of society. This invention of the smartphone has extended the way humans entertained, improved interaction, and also influenced social progress in human communities. The consequence of this event has made the demand for smartphones growing rapidly day by day. Different smartphones come with different specifications to make broader choices for the user to choose from. Due to the midst of thousands of smartphone advertisements from numerous brands have caused the buyer to have a hard time when deciding which smartphone matches their desire. Usually, smartphone buyers will consider budget, brand, camera, storage, and many more. Nevertheless, since all these specifications need to take into consideration, smartphone buyers may not be able to express their preferences accurately and will face some difficulties when comparing the preferences of the smartphone features. Subsequently, this action may be the cause of time-consuming when making a decision as it requires cognitive effort to make a manual survey. Thus, the objective of the system is to design and develop a progressive web application (PWA) recommendation system for purchasing a smartphone by using genetic algorithm and test the system functionality. The technique used is Genetic Algorithm where the user input will be the smartphone specification preferences and budget so these inputs will be processed through Genetic Algorithm and a list of optimum results will be obtained. The functionality testing of this project shows that the system successfully recommending three smartphones above 85% of accuracy from user preferences and achieve the project objective. For future recommendation, this system can make the user straight away deals with the seller to buy the smartphone and displays the picture of the smartphone.

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