Universiti Teknologi MARA

Home Buyer Assistant Using Artificial Bee Colony Algorithm

Muhammad Izzat Azri Bin Azman

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ABSTRACT

Tremendous increase in house price can be observed in recent years. Choosing an affordable and suitable home to buy would be a headache for most of the home buyers. They are stuck between financial limitation, and temptation given buy estate agent. To assist the home buyers in making a wise decision, this project proposed an assistant to home buyers finding a desired house with affordable price and suitable features and specification. The assistant will provide suitable house recommendation to a home buyer based on particular information house specification such as house price, locations neighbourhood and surrounding information. This project used Artificial Bee Colony Algorithms (ABC) by adapting the food foraging behaviour of bee in honey bee and find a suitable house for home buyer based on their requirement. The ABC algorithm is implemented to improve the recommendation accuracy. Firstly, the assistant will calculate their financial availability as affordable price. Then, home buyers need to provide their home preferences and its priority for example home features, amenities and accessibility of a house. Then the searching process will begin. There are two main processes involved in ABC Algorithm which are exploration and exploitation. In the exploration process, the algorithm will search for a population of house that matches with home buyers' financial availability. After that, in exploitation process, the algorithms will exploit the generated population to search for a desired home according to the preferences and its priority. The suggestion is made based on matching between the buyer's preferences and house properties. . The suggestion or result is made based on matching between the buyer's preferences and house properties. The result has been evaluated by 10 home buyers to know the efficiency of the suggestions. In the future, the efficiency of the result will be improved based on technology growth with adding some application such as GPS and map of the house in mobile version.

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