

**UNIVERSITI TEKNOLOGI MARA**

**DIAGNOSIS OF DENGUE USING FUZZY  
EXPERT**

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# Abstract

“Dengue is a mosquito-borne tropical disease caused by the dengue virus. Dengue is spread by several species of female mosquitoes of the Aedes genus which is Aedes aegypti.” However, the dengue symptoms have many similarities with other diseases like malaria. In addition, the diagnosis of dengue manually may occur some human error which makes the diagnosis of dengue inaccurate. This paper presents the use of a fuzzy expert system in diagnosing the disease with the objectives to identify clinically-known dengue symptoms, develop the diagnosis system using MATLAB and Fuzzy Logic Toolbox, and classify the dengue symptoms from the information received. The methodology of this paper is the waterfall model, which is the life cycle of the system development (SDLC). Moreover, the paper is about the development of a system to help doctors diagnose dengue symptoms more efficiently. The development of a dengue diagnosis system using a fuzzy expert system will improve the work capability for all doctors because the system helps in disease analysis with more accuracy and efficiency. The Mamdani fuzzy inference technique is the most suitable for the development of the system because this system needs an output membership function.

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