

**A DISEASE DIAGNOSE SYSTEM OF DIABETES MELLITUS USING  
THE BACKPROPAGATION ALGORITHM  
(Studi Kasus: Puskesmas Mlati 1)**

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***ABSTRACT***

*Research on the relationship between natural phenomena is the basis of the aims of science and plays an essential role in decision-making in everyday life. An example is to detect diabetes mellitus. Pattern recognition technology with artificial neural networks (ANN) can be utilized in this problem by creating an early detection system for whether or not a patient has diabetes mellitus. Diabetes mellitus is a chronic disease caused by the failure of the pancreas to produce adequate amounts of the hormone insulin, which causes an increase in glucose levels in the blood.*

*Diabetes mellitus is a non-communicable disease and is a significant public health problem. In general, diabetes patients are divided into two types: type one diabetes, which usually appears at a young age or children, and type two diabetes, which occurs in adulthood. There is no wet or dry type of diabetes in the medical context.*

*Wounds that do not heal and tend to cause limb amputation are complications due to uncontrolled blood sugar levels and blood vessel complications. The disease can occur in both type 1 diabetes mellitus and type 2 diabetes mellitus. Therefore, a diabetes mellitus diagnosis system was created using the backpropagation algorithm that uses the Matlab application. It is hoped that people who seek treatment can be diagnosed with this system effectively and efficiently to facilitate the doctor's work on duty at Mlati 1 Puskesmas.*

*Keywords: System, Backpropagation, Disease, Diabetes Mellitus*