

# Heart Disease Diagnosis System Using Fuzzy Logic

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## ABSTRACT

Treating people with ill health is a major problem in developed and underdeveloped countries. Most of these countries allocate a considerable portion of their budgets to ensuring that their citizens are healthy. However, countries remain unable to meet the demand for ideal medical services of their citizens because of the shortage of medical expertise in various hospitals. Medical diagnosis systems have been widely applied to diagnosing the symptoms of diseases such as cancer and diabetes. However, the analysis tools and methods are insufficient for identifying hidden relationships in the symptoms of coronary heart disease (CHD). Consequently, the ratio of people who suffer from this disease is growing rapidly; 12 million deaths each year are attributed to CHD. Meanwhile, the complex interdependency on various symptoms of this ailment indicates the difficulties in diagnosing CHD at an early stage. Furthermore, the diagnosis of CHD is a complex task that requires precision and effectiveness. Doctors do not have adequate time to devote to each case and encounter difficulties in keeping abreast of the newest application developments. Many alternative methods have been suggested for medical diagnosis in the healthcare domain. However, evaluating the functionality of CHD diagnosis systems remains challenging. Therefore, this study aims to develop a system that diagnoses CHD via fuzzy logic and evaluate the functionality of the proposed diagnostic CHD system. This study contributes to the healthcare domain as the developed system can assist doctors in accurately diagnosing when CHD symptoms have an ambiguous relationship. Therefore, the developed system will decrease doctors' workloads during consultations.

## Keywords

Coronary heart disease, fuzzy logic, health care, coronary heart disease diagnose system.