Universiti Teknologi MARA

Heart Diseases Recognition Using Fuzzy Expert System

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ABSTRACT

Fuzzy expert system has been implemented in various field of research such as medical and industrial. In this project, it focuses on finding the potentiality of having getting heart disease. Fuzzy expert system is implemented in this project because it is more suitable in order to determine the percentage of having heart disease based on the risk factors. By using this technique, it is easier to mature and explicit the knowledge to determine potential having heart disease that involved which imprecise and vague data. Sugeno-style inferences are used in the fuzzy expert system because it is well suited for mathematical analysis. As the fuzzy expert system prototype have been developed, the combination of heart disease data which is the risk factors and rules would produce results based on user's input. The result of this project depends on the variety of inputs by the user and an individual is considered to have the potential of having heart disease when either one of the factors is in high value.

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CHAPTER 1

INTRODUCTION

This chapter presents the overview and brief explanation of the project entitled 'Heart Diseases Recognition using Fuzzy Expert System'. This chapter provides brief description on problem background, problem statement, research questions, objectives, scope, and significance of the project.

1.1 Background Study

In Malaysia, a coronary heart disease is the number one killer in terms of diseases and health-related problem. According to WHO (World Health Organization), the total number of death in Malaysia, in 2010 resulted from coronary heart disease was at 22,701. This constitutes to about 22.18% of the total deaths in the country.

One of the major problems in medicine is making the diagnosis. Tons of software applications have been attempted with a specific end goal to helps human specialists, offering result. In a few cases, computer-assisted helped finding have been guaranteed to be considerably more exact than those clinicians, as computers have the preferences of not being influenced by physical or mental pressure, fatigue or interruption. Computers in solution cannot supplant human experts yet they might be utilized by specialists to twofold check their analysis (Chatzimichail et al. (2010)

Many techniques have utilized processed engineering within the fields of medicine area to diagnosis and treatment of illness furthermore patient pursuit has exceptionally expanded. The techniques for artificial intelligence have generally been utilized within the medicinal application for diagnosis and medicines, for