Abstract

Heart diagnosis equipment is not always available in every medical center, especially in the rural areas where less support and care. Physician intuition and experience are not always enough to attain high quality medical results. Therefore, medical errors and unwanted results are reasons for a need for unconventional computer-based diagnosis systems, which in turns reduce medical fatal errors, increasing the patient safety and save lives. The proposed system, which is based on Artificial Neural Networks (ANNs), provides a decision support system to classify the heart diseases: mitral stenosis, aortic stenosis and ventricular septal defect. Additionally, the system offers a promising opportunity to develop an operational screening and testing device for heart disease diagnosis and can provide great assistance for clinicians to make advanced heart sound diagnosis, especially in rural areas where high tech devices may not be available. Series of experiments have been conducted, using real medical data, to test the performance and accuracy of the proposed system. Compared results revealed that the system performance and accuracy are excellent, with a heart diseases classification accuracy of 92%.

References

Index Terms

Computer Science

Artificial Intelligence

Keywords

Anns  Decision Support System  Heart Disease Diagnosis  Knowledge Base  Classification

Accuracy