Report -1

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In this project we are going to work on heart disease detection, through our model we can detect whether the person is having a heart disease or not based on health data of the person.

A combination of lifestyle changes, medicine and surgery can be used to effectively manage heart disease. The functioning of the heart can be improved with the right treatment. Predicted results can be used to reduce the cost of surgery. Predicting accurately with few tests and attributes the presence of heart disease is the overall objective of my work. Doctors often make decisions based on their intuition and experience rather than on the knowledge hidden in the data set. The quality of service provided to patients is affected by the practices of this practice.

According to the report given by tretty hospital every day 900 people in India under the age of 30 years are diving because of heart attack if we can predict the heart disease earlier we can save many lives this is were Artificial intelligence (AI) comes into the picture.

Artificial intelligence (AI) can quickly and effectively analyse enormous amounts of data; it can be very helpful in diagnosing cardiac problems. Electrocardiograms (ECGs), medical pictures, and other types of health data can all contain patterns and relationships that are challenging for human clinicians to spot.

AI can be used, as an illustration, to evaluate echocardiograms—ultrasound images of the heart. These photos may be immediately analysed by AI algorithms to look for any anomalies, such as an enlarged heart or issues with the heart valves.

ECGs, which track the electrical activity of the heart, can also be analysed by AI. A heart ailment, such as an arrhythmia or irregular heart rhythms, may be indicated by patterns in ECGs that can be recognised by AI algorithms.

Additionally, AI can identify individuals who are at higher risk for heart disease by analysing patient data such as medical history, family history, lifestyle behaviours, and other health parameters. AI systems that analyse this data can assist medical professionals in developing more precise diagnoses and individualised treatment regimens for heart disease patients.

Some of the ways to detect heart disease are:

Risk prediction: In order to accurately estimate a patient's risk of getting heart disease, AI algorithms can examine vast volumes of patient data, including medical history, family history, lifestyle factors, and laboratory test results.
Early detection: AI algorithms can examine medical images like echocardiograms, MRI scans, and CT scans to find early heart disease indicators before symptoms appear.
Diagnosis: By examining patient data and medical imaging to find patterns that could point to a specific cardiac problem, AI algorithms can help clinicians make a diagnosis of heart disease.
Personalised treatment: By examining patient data and medical pictures to determine the best therapy options for a specific patient, AI algorithms can help clinicians create individual treatment programmes for patients.

Overall, AI can assist physicians in making more precise diagnoses, forecasting patient outcomes, and offering more individualised treatment options, all of which can improve patient outcomes and lower healthcare costs.