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Heart Optima AI – Disease Prediction System

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Abstract: *One of the most prominent tools for detecting cardiovascular problems is the electrocardiogram (ECG). The electrocardiogram (ECG or EKG) is a diagnostic tool that is used to routinely assess the electrical and muscular functions of the heart. Even though it is a comparatively simple test to perform, the interpretation of the ECG charts requires considerable amounts of training. Till recently, the majority of ECG records were kept on paper. Thus, manually examining and re- examining the ECG paper records often can be a time consuming and daunting process.*

The system integrates a machine learning model trained on diverse ECG datasets to differentiate between normal and abnormal heart conditions. By automating the diagnostic process, Heart Optima AI aims to assist healthcare professionals in making quicker and more accurate decisions, reducing human error and improving accessibility, especially in remote areas with limited medical expertise. The implementation of this AI-powered solution enhances the efficiency of cardiac disease screening, contributing to the advancement of predictive healthcare and early intervention strategies.

Keywords: Heart disease prediction, Machine learning, ecg images, cardiovascular disease, decision support system

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