HEART DISEASE PREDICTION

A Project report submitted in partial fulfilment of requirements for the award of degree of

BACHELOR OF TECHNOLOGY
IN
COMPUTER SCIENCE AND ENGINEERING
(AI & ML)

by

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G. PULLA REDDY ENGINEERING COLLEGE (Autonomous): KURNOOL
(Affiliated to JNTUA, ANANTAPURAMU)

2024 – 2025

Department of

EMERGING TECHNOLOGIES IN COMPUTER SCIENCE

G. PULLA REDDY ENGINEERING COLLEGE (Autonomous): KURNOOL

(Affiliated to JNTUA, ANANTAPURAMU)

CERTIFICATE

This is to certify that the Project Work entitled *'Heart Disease Prediction'* **is a bonafide record of work carried out by**

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Under my guidance and supervision in partial fulfilment of the requirements for the award of degree of

BACHELOR OF TECHNOLOGY
IN
COMPUTER SCIENCE AND ENGINEERING
(AI & ML)

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Signature of the External Examiner : ……..

DECLARATION

We hereby declare that the project titled "HEART DISEASE PREDICTION" is an authentic work carried out by us as the students of **G. PULLA REDDY ENGINEERING COLLEGE (Autonomous) Kurnool,** during 2024-2025 and has not been submitted elsewhere for the award of any degree or diploma in part or in full to any institute.

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ABSTRACT

TITLE: Heart Disease Pre

Heart disease is a leading global health concern, requiring accurate and timely diagnosis to reduce mortality rates and improve patient outcomes. This project harnesses the power of machine learning to predict the likelihood of heart diseases by analyzing critical patient data, such as age, blood pressure, cholesterol levels, heart rate, and lifestyle habits. Utilizing advanced algorithms like Support Vector Machines (SVM), Random Forests, and Neural Networks, the system processes and models structured data after thorough preprocessing steps, including cleaning, feature selection, and normalization. The machine learning models provide personalized risk scores and actionable diagnostic insights, aiding healthcare professionals in early detection and preventive interventions. Coupled with intuitive visualizations and user-friendly dashboards, this solution enhances clinical decision-making while reducing diagnostic errors and resource strain on healthcare systems. Designed for adaptability and scalability, the system seeks to empower healthcare providers, improve patient care, and pave the way for the integration of AI-driven diagnostics into medical practice

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