Introduction

**Cardiovascular diseases (CVDs)** are the leading cause of mortality worldwide, killing an estimated 17.9 million people each year, accounting for 31% of all fatalities worldwide. Heart attacks and strokes cause four out of every five CVD fatalities, and one-third of these deaths occur in adults under the age of 70. CVDs are a common cause of heart failure, and this dataset contains 11 variables that can be used to predict heart disease.

People with cardiovascular disease or at high cardiovascular risk (due to the presence of one or more risk factors such as cholesterol,old-age, or pre-existing illness) require early identification and care, which a machine learning model may greatly assist with.



**Attribute Information**

* **Age:** age of the patient [years]
* **Sex:** sex of the patient [M: Male, F: Female]
* **ChestPainType**: chest pain type [TA: Typical Angina, ATA: Atypical Angina, NAP: Non-Anginal Pain, ASY: Asymptomatic]
* **RestingBP:** resting blood pressure [mm Hg]
* **Cholesterol:** serum cholesterol [mm/dl]
* **FastingBS:** fasting blood sugar [1: if FastingBS > 120 mg/dl, 0: otherwise]
* **RestingECG:** resting electrocardiogram results [Normal: Normal, ST: having ST-T wave abnormality (T wave inversions and/or ST elevation or depression of > 0.05 mV), LVH: showing probable or definite left ventricular hypertrophy by Estes' criteria]
* **MaxHR**: maximum heart rate achieved [Numeric value between 60 and 202]
* **ExerciseAngina:** exercise-induced angina [Y: Yes, N: No]
* **Oldpeak: oldpeak** = ST [Numeric value measured in depression]
* **ST\_Slope:** the slope of the peak exercise ST segment [Up: upsloping, Flat: flat, Down: downsloping]
* **HeartDisease**: output class [1: heart disease, 0: Normal]