

## Project Title:

# Analysis & Predictive Modelling for Heart Disease and Stroke Mortality Rates Among U.S. Adults Aged 35+

### **About the Project:**

This project involves analyzing and understanding the variations in heart disease and stroke mortality data among US adults based on factors such as Year, Type of Heart Disease, Age, Gender, Race/Ethnicity. Here the data is preprocessed, variations are analyzed, relations are studied & based on the findings, predictive models with necessary variables are built to forecast mortality rates of U.S population having different heart diseases. The models implemented are Linear Regression and XGB Regressor. The latter one came out to be a better model with an excellent  $R^2$  score of 0.939. This is a critical public health initiative as it helps healthcare authorities and policymakers allocate resources, design targeted interventions, and develop preventive strategies to combat the most vulnerable diseases more effectively.