

EXPLORING THE PRIMARY RISK FACTORS DRIVING ISCHEMIC HEART DISEASE

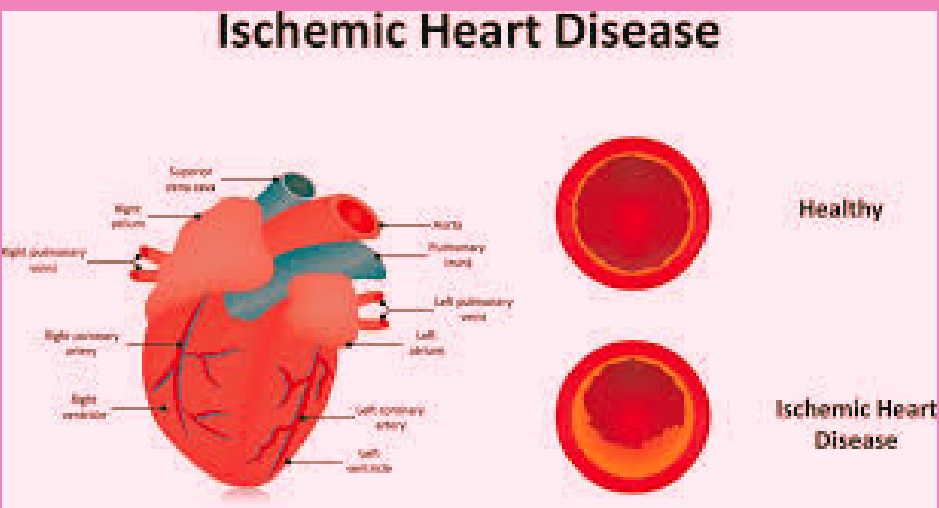
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Ischemic heart disease

Ischemic heart disease refers to heart weakening caused by reduced blood flow to your heart. Typically, this reduced blood flow is the result of coronary artery disease, a condition that occurs when your coronary arteries narrow.



OBJECTIVES

- Identify:** Systematically identify and categorize key risk factors.
- Analyze:** Employ advanced machine learning techniques to analyze the impact of these risk factors on IHD.
- Innovate:** Discover less obvious risk factors that could offer new insights into the prevention and management of IHD.

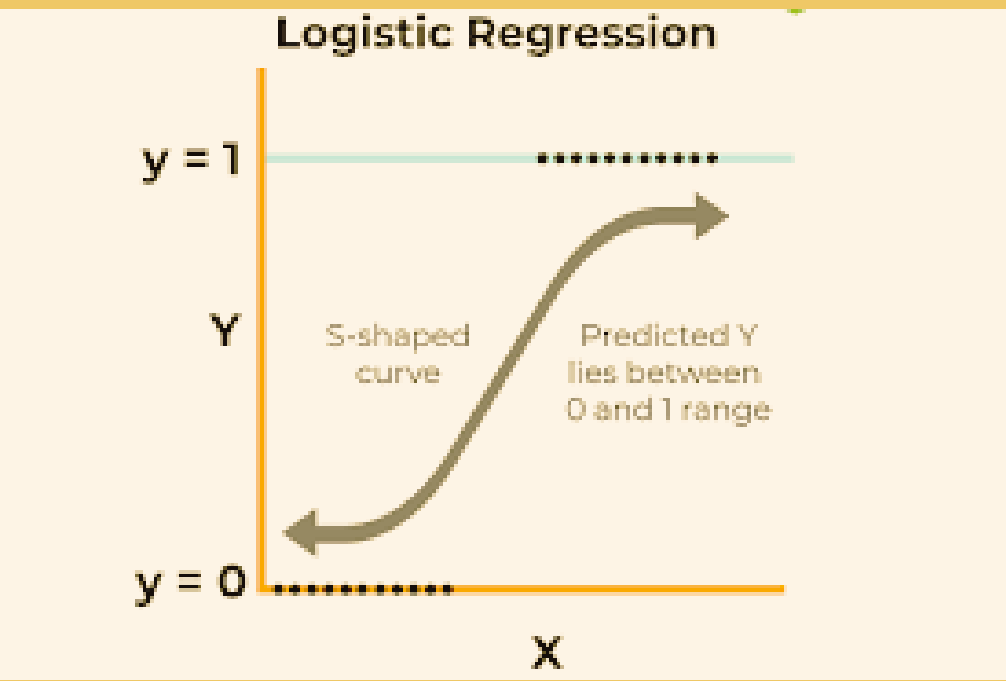
THE UK BIOBANK RESOURCE

- Purpose:** Established to provide valuable data for researchers studying the genetic and environmental factors.
- Data Collection:** Participants have provided samples and detailed health information.



LOGISTIC REGRESSION MODEL

Logistic regression is ideal for binary classification, making it a great fit for this project where the goal is to predict the presence or absence of a condition.



OPTIMIZED LOGISTIC REGRESSION WORKFLOW

- This project involves data preprocessing and machine learning pipeline using logistic regression for binary classification. It involves strategic data cleaning, feature engineering, and hyperparameter tuning. The model's performance is optimized using recall, F1 score, and ROC-AUC.
- Best Model Parameters:**
 - Regularization Method** - L1
 - Number of iterations** - 500
 - Penalty** - 1
- Best Model Threshold:** 0.053585833079805516
- Best Model Recall Score:** 0.8312387791741472

TECHNOLOGIES

