Heart Disease Prediction

Heart disease is one of the leading causes of death for people of most races in the US (African Americans, American Indians and Alaska Natives, and white people). About half of all Americans (47%) have at least 1 of 3 key risk factors for heart disease: high blood pressure, high cholesterol, and smoking. Other key indicator includes diabetic status, obesity (high BMI), not getting enough physical activity or drinking too much alcohol. Detecting and preventing the factors that have the greatest impact on heart disease is very important in healthcare.

Object

Predict Heart Disease from the data that can predict a patient's condition.

Dataset

The dataset come from the Centers for Disease control and prevention (CDC) and is a major part of the Behavioral Risk Factor Surveillance System (BRFSS), which conducts annual telephone surveys to gather data on the health status of U.S. residents.

The dataset contains 18 variables and `319795` entries.

Link: https://www.kaggle.com/code/yasiruvinodpathirana/heart-disease-prediction/data?select=heart_2020_cleaned.csv

Explanation of the features of the dataset

1. HeartDisease : Respondents that have ever reported having coronary heart disease (CHD) or myocardial infarction (MI).
2. BMI : Body Mass Index (BMI).
3. Smoking : Have you smoked at least 100 cigarettes in your entire life? (The answer Yes or No).
4. AlcoholDrinking : Heavy drinkers (adult men having more than 14 drinks per week and adult women having more than 7 drinks per week
5. Stroke: (Ever told) (you had) a stroke?
6. PhysicalHealth : Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good? (0-30 days).
7. MentalHealth : Thinking about your mental health, for how many days during the past 30 days was your mental health not good? (0-30 days).
8. DiffWalking : Do you have serious difficulty walking or climbing stairs?
9. Sex : Are you male or female?
10. AgeCategory: Fourteen-level age category.
11. Race : Imputed race/ethnicity value.
12. Diabetic : (Ever told) (you had) diabetes?

13. PhysicalActivity : Adults who reported doing physical activity or exercise during the past 30 days other than their regular job.
14. GenHealth : Would you say that in general your health is...
15. SleepTime : On average, how many hours of sleep do you get in a 24-hour period?
16. Asthma : (Ever told) (you had) asthma?
17. KidneyDisease : Not including kidney stones, bladder infection or incontinence, were you ever told you had kidney disease?
18. SkinCancer : (Ever told) (you had) skin cancer?

Questions

1. The count of heart disease for each AgeCategory?

2. The count of heart disease for Smoking people for each sex?
3. The count of heartdisease from each sex based on race?
4. The count of heart disease depending on SleepTime?
5. the count of heartdisease for KidneyDisease for each sex?
6. The count of heart disease for AlcoholDrinking people?
7. The count of heartdisease of smoking people that have age older th an 80 and not walking and genhealth poor and have canser or kidny disease for each sex?
8. The count of heartdisease of smoking people that have age older th an 80 and not walking and genhealth poor and have stroke or kidny disease for each sex?
9. The count of heartdisease of notsmoking people that have age older than 80 and walking and genhealth good and have canser or kidny disease for each sex?
10. The count of heart disease that have Diabetic?
11. The count of heart disease that have Asthma?