ScaleSane 219 FINAL

Question: How do different combinations of personal characteristics and lifestyle habits influence the likelihood of obesity among individuals?

Motivation: Obesity is a common health problem that is caused by different factors such as gender, family history, food choices, and physical activity levels. Understanding how these factors combine and contribute to obesity risk might help inform public health actions and customized health advice. Using machine learning models to investigate various combinations of these parameters, we can find major predictors of obesity and design more effective obesity prevention and management measures. This study intends to contribute to the larger understanding of obesity and inform specific strategies to address this critical public health concern.

About the data: To collect data for this project, information was gathered on obesity levels among people living in Mexico, Peru, and Colombia. The data collection approach targeted people aged 14 to 61, capturing a wide range of eating habits and physical conditions. Anonymous users were encouraged to take a survey on an online platform to learn about their personal characteristics, eating habits, and lifestyle preferences. The survey asked about gender, age, height, weight, family history of obesity, dietary choices, frequency of physical activity, technology use, alcohol use, and transportation preferences. The dataset includes 17 columns and 2111 responses. Below is information about the columns in the dataset

Question	Column Name	Categorical	Quantitative	Answers
What is your gender	Gender	Yes	No	Yes No
what is your age	Age	No	yes	Numerical
What is your Height	Height	No	yes	Numerical - Meters
what is your weight	Weight	No	Yes	Numerican - Kilograms
Has a family member suffered or suffers from overweight	family_history_with_overweight	Yes	No	Yes No
Do you eat high caloric food frequently?	FAVC	Yes	No	Yes No
Do you usually eat vegetables in your meals?	FCVS	No	Yes	Numerical
How many main meals do you have daily?	NCP	No	Yes	Numerical
Do you eat any food between meals?	CAEC	Yes	No	No Sometimes Frequently Always

Do you smoke?	SMOKE	Yes	No	Yes No
How much water do you drink daily?	CH20	No	Yes	Numerical
Do you monitor the calories you eat daily?	SCC	Yes	No	Yes No
How often do you have physical activity?	FAF	No	Yes	Numerical
How much time do you use technological devices such as cell phones, video games, television, computer and others?	TUE	No	Yes	Numerical
How often do you drink alcohol?	CALC	Yes	No	I do not drink Sometime,s Frequently Always
Which transportation do you usually use?	MTRANS	Yes	No	Automobile;e Motorbike Biker PublIC Transportation Walking
Obesity Level	NObeyesdad	Yes	No	Obesity_Type_I Obesity_Type_III Obesity_Type_II Overweight_Level_I Overweight_Level_II Normal_Weight Insufficient_Weight