Predicting the risk factors of cardiology diseases

Project Proposal

The objective of this project is to use classification models to formulate cardiology disease risk factors, including age and gender, chronic diseases, smoking, obesity, high cholesterol level, and sedentary lifestyle.

Predicting the risk factors of cardiology diseases to help diagnose patients early, start treatment, and prevent complications.

Design

What are the risk factors of cardiology diseases?

Modifiable and nonmodifiable risk factors. non-modifiable risk factors including age, gender, and chronic diseases. modifiable risk factors as treating high cholesterol levels, smoking caseation, exercise, and diet to lose weight.

With this data, we are increasing social awareness and preventing further complications by detecting the disease as early as possible.

Data Description

The dataset contains 99,999 data points with 14 features for each.

include age, gender, weight and height, chronic diseases (diabetes mellitus, hypertension, hypercholesteremia), smoking, and a sedentary lifestyle.

Tools

- Numpy and Pandas for data manipulation.
- Scikit-learn for modeling.

- The figure data structure and plotly express, line charts for plotting.

Predicting the risk factors of cardiology diseases

- Bokeh for interactive visualizations.
- The k-nearest neighbors (KNN) algorithm, linear-regression model.