Team 4: Heart Disease Indicators

DATS 6103: Summary Report

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December 16, 2022

Predicting Heart Disease Using Health Indicators

**Introduction**

Heart Disease is one of the most common chronic diseases in the United States. Each year millions of Americans are impacted. For many, this means they incur the cost of expensive medical bills. For a smaller subsect though, it is even worse. In 2020, heart disease was the leading cause of death in the United States, claiming the lives of nearly 700,000 individuals. Because of how deadly the disease is, it is important to get out ahead of it and identify risk factors. Unfortunately, people often learn they have heart disease after a major, and potentially deadly symptoms such as chest pain, a heart attack, or cardiac arrest. As noted, there are risk factors people should consider before the point is reached where major symptoms become a problem. Some examples of risk factors include natural ageing, the building up of plaque in arteries, chronic inflammation, high blood pressure, and diabetes. Ideally individuals should assess themselves for risk factors before they suffer from one of the major symptoms.

Using the breadth of data from the Center for Disease Control’s Behavioral Risk Factor Surveillance System (BRFSS), we look at indicators of heart disease and attempt to create a model to assess an individuals risk for heart disease. The BRFSS is a telephone survey first conducted by the CDC in 1984. It is conducted each year and over 400,000 respondents are reached each year. Respondents are asked about a range of health-related risk behaviors such as if they smoke or if they get regular exercise. They are also asked about chronic conditions such as if they have heart disease. We use data from the 2015 survey that when cleaned up has 253,680 responses.