PROBLEM STATEMENT

Heart disease is the reason for the death of approximately 17.9 million lives each year. Predicting if a person might be susceptible to heart diseases is not an easy task. However, we can get a close approximation by using a ML model. In this model, we use 13 variables to predict the presence/ absence of heart disease. We also use visualization tools to create an interactive dashboard.

What is the issue?	Heart disease or cardiovascular disease is the cause of over 17.9 million deaths every year. It is vital to be able to predict if a person has the possibility of getting a heart disease.
Who does the problem affect?	People of age 65 or older are more affected by heart diseases.
What are the boundaries of the problem?	Doctors and medical experts.
What are the common risk factors associated with the issue?	High blood pressure, high low-density lipoprotein (LDL) cholesterol, diabetes, smoking and secondhand smoke exposure, obesity, unhealthy diet, and physical inactivity.
What are the complications caused by the issue?	● **Heart failure.** This is one of the most common complications of heart disease. Heart failure occurs when the heart can't pump enough blood to meet the body's needs. ● **Heart attack.** A heart attack may occur if a blood clot is stuck in a blood vessel that goes to the heart. ● **Stroke.** The risk factors that lead to heart disease can also lead to an ischemic stroke. This type of stroke happens when the arteries to the brain are narrowed or blocked. Too little blood reaches the brain. A stroke is a medical emergency — brain tissue begins to die within just a few minutes of a stroke. ● **Aneurysm.** An aneurysm is a bulge in the wall of an artery. If an

	aneurysm bursts, you may have life-threatening internal bleeding. ● **Peripheral artery disease.** In this condition, the arms or legs — usually the legs — don't get enough blood. This causes symptoms, most notably leg pain when walking (claudication). Atherosclerosis can lead to peripheral artery disease. ● **Sudden cardiac arrest.** Sudden cardiac arrest is the sudden loss of heart function, breathing and consciousness. It's usually due to a problem with the heart's electrical system. Sudden cardiac arrest is a medical emergency. If not treated immediately, it results in sudden cardiac death.
Why should people use this?	It is a good enough approximation of predicting whether a person has a high risk of getting a heart disease. It is free and easy to use and could be the first step in saving a person’s life.
Why is it important that we fix the problem?	Treatments are more likely to improve the quality of life of the patients and their families.