Visualizing and Predicting Heart Diseases with an Interactive Dash Board

UNDERSTANDING THE DATASET

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DESCRIPTION:

The leading cause of death in the developed world is heart disease. Therefore, there needs to be work done to help prevent the risks of having a heart attack or stroke. So, this project is based on to prediction of heart disease.

Here, we use this dataset to predict which patients are most likely to suffer from a heart disease in the near future using the features given: <u>Dataset</u>

Let's understand the data we're working with and give a brief overview of what each feature represents or should represent

| COLUMN | DESCRIPTION |
|-------------------------|---|
| Age | Patient's age |
| Sex | Patient's sex |
| Chest pain | Number of times the chest pain has |
| | occurred |
| BP | Patient's Blood pressure |
| cholesterol | Patient's Cholesterol level |
| FBS over 120 | Patient's fasting blood sugar level over |
| | 120 |
| EKG results | Electrocardiogram result of the patient |
| Max HR | Patient's maximum heart rate level |
| Exercise angina | Pain in the chest because of exercise, |
| | stressetc |
| ST depression | ST segment depression |
| Slope of ST | Slope of ST segment |
| Number of vessels fluro | To diagnose the vessels |
| Thallium | Thallium test is done for cardiac imaging |
| | studies |
| Heart Disease | Presence/Absence of heart disease |

Heart Disease Excel Sheet:

| A | В | C | 1 |) | Ε | F | G | Н | 1 | J | K | L | М | N | 0 | Р | Q | R | S |
|-----|-----------------|---------|--------|-----|--------------|------------|--------------|-------|---------------|------------|-------------|-------------|--------|-------------|-----|---|---|---|---|
| Age | Sex | Chest p | ain BP | (| Cholesterc F | BS over 1E | KG result Ma | ax HR | Exercise a ST | depres: Sl | ope of S' N | umber o Tha | allium | Heart Disea | ise | | | | |
| | 70 | 1 | 4 | 130 | 322 | 0 | 2 | 109 | 0 | 2.4 | 2 | 3 | 3 | 3 Presence | | | | | |
| | 67 | 0 | 3 | 115 | 564 | 0 | 2 | 160 | 0 | 1.6 | 2 | 0 | 7 | 7 Absence | | | | | |
| | 57 | 1 | 2 | 124 | 261 | 0 | 0 | 141 | 0 | 0.3 | 1 | 0 | 7 | 7 Presence | | | | | |
| | 64 | 1 | 4 | 128 | 263 | 0 | 0 | 105 | 1 | 0.2 | 2 | 1 | 7 | 7 Absence | | | | | |
| | 74 | 0 | 2 | 120 | 269 | 0 | 2 | 121 | 1 | 0.2 | 1 | 1 | 3 | 3 Absence | | | | | |
| | 65 | 1 | 4 | 120 | 177 | 0 | 0 | 140 | 0 | 0.4 | 1 | 0 | 7 | 7 Absence | | | | | |
| | 56 | 1 | 3 | 130 | 256 | 1 | 2 | 142 | 1 | 0.6 | 2 | 1 | 6 | Presence | | | | | |
| | 59 | 1 | 4 | 110 | 239 | 0 | 2 | 142 | 1 | 1.2 | 2 | 1 | 7 | 7 Presence | | | | | |
| | 60 | 1 | 4 | 140 | 293 | 0 | 2 | 170 | 0 | 1.2 | 2 | 2 | 7 | 7 Presence | | | | | |
| | 63 | 0 | 4 | 150 | 407 | 0 | 2 | 154 | 0 | 4 | 2 | 3 | 7 | 7 Presence | | | | | |
| | 59 | 1 | 4 | 135 | 234 | 0 | 0 | 161 | 0 | 0.5 | 2 | 0 | 7 | 7 Absence | | | | | |
| | 53 | 1 | 4 | 142 | 226 | 0 | 2 | 111 | 1 | 0 | 1 | 0 | 7 | 7 Absence | | | | | |
| | 44 | 1 | 3 | 140 | 235 | 0 | 2 | 180 | 0 | 0 | 1 | 0 | 3 | Absence | | | | | |
| | 61 | 1 | 1 | 134 | 234 | 0 | 0 | 145 | 0 | 2.6 | 2 | 2 | 3 | 3 Presence | | | | | |
| | 57 | 0 | 4 | 128 | 303 | 0 | 2 | 159 | 0 | 0 | 1 | 1 | 3 | Absence | | | | | |
| | 71 | 0 | 4 | 112 | 149 | 0 | 0 | 125 | 0 | 1.6 | 2 | 0 | 3 | Absence | | | | | |
| | 46 | 1 | 4 | 140 | 311 | 0 | 0 | 120 | 1 | 1.8 | 2 | 2 | 7 | 7 Presence | | | | | |
| | 53 | 1 | 4 | 140 | 203 | 1 | 2 | 155 | 1 | 3.1 | 3 | 0 | 7 | 7 Presence | | | | | |
| | 64 | 1 | 1 | 110 | 211 | 0 | 2 | 144 | 1 | 1.8 | 2 | 0 | 3 | Absence | | | | | |
| | 40 | 1 | 1 | 140 | 199 | 0 | 0 | 178 | 1 | 1.4 | 1 | 0 | 7 | 7 Absence | | | | | |
| | 67 | 1 | 4 | 120 | 229 | 0 | 2 | 129 | 1 | 2.6 | 2 | 2 | 7 | 7 Presence | | | | | |
| | 48 | 1 | 2 | 130 | 245 | 0 | 2 | 180 | 0 | 0.2 | 2 | 0 | 3 | 3 Absence | | | | | |
| | 43 | 1 | 4 | 115 | 303 | 0 | 0 | 181 | 0 | 1.2 | 2 | 0 | 3 | 3 Absence | | | | | |
| | Heart Disease P | | • | 442 | 204 | | _ | 442 | - | 0.4 | | 1 (| | | | | | | |