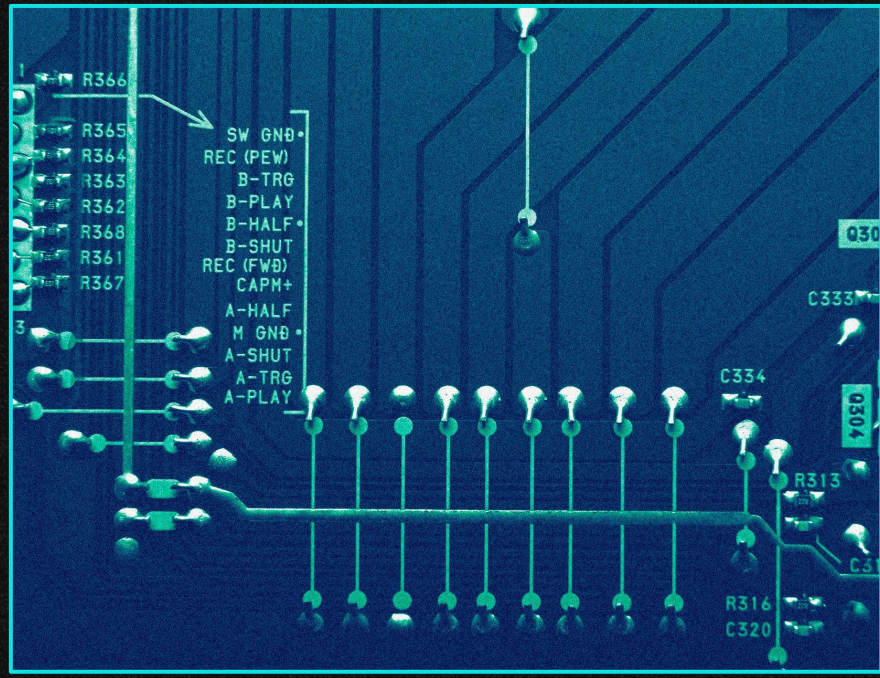
ILLINOIS DATA SCIENCE CLUB

Heart Disease Classification

DATA DIVE



By Team CWMDSJ

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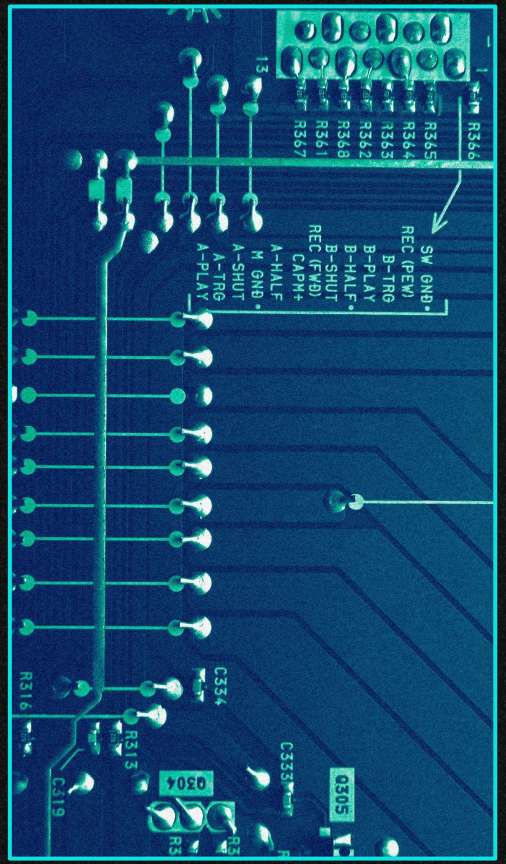

Problem Identification

- Why heart disease ?
  - The leading cause of death for both men and women in U.S.
  - Is heart disease preventable?

- To solve the questions? We should know:
  - What features are correlated with heart disease ?
  - How to classify the features that are correlated with heart disease?

Collecting Data

- Dataset from UC Irvine
  - Cleveland Database
- 14 Columns (more detail on next slide)
  - 13 possible explanatory variables
  - 1 response variable
-

Column Descriptions

- Age - age in years
- Sex - (1 = male; 0 = female)
- CP - chest pain type
- Trestbps - resting blood pressure (in mm Hg on admission to the hospital)
- Chol - serum cholesterol in mg/dl
- FBS - (fasting blood sugar > 120 mg/dl) (1 = true; 0 = false)
- Restecg - resting electrocardiographic results
- Thalach - maximum heart rate achieved
- Exang - exercise induced angina (1 = yes; 0 = no)
- Oldpeak - ST depression induced by exercise relative to rest
- Slope - the slope of the peak exercise ST segment
- Ca - number of major vessels (0-3) colored by fluoroscopy
- Thal - 1 = normal; 2 = fixed defect; 3 = reversible defect
- Num - artery diameter (0-4)

Data Cleaning

Our data was in the wrong:

- Double click on it
- Type your new text in the dialog box
- You can change the fill color in the top menu
- You can also modify the stroke, its color, thickness or type
- Press Enter

[insert pic of error]

Machine Learning Model

Exploratory Data Analysis

Feature Analysis & Statistical Analysis