Derek Cheung

Padrick Beggs

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We will attempt to determine the (label) presence of heart disease using classical machine learning algorithms given presence of certain features (please refer to table).

**Dataset: (is attached in email)**

|  |  |  |
| --- | --- | --- |
| **Feature** | **Description** | **Key** |
| age | Age of patient. | none |
| sex | Gender of patient. | 1 = male  0=female |
| cp | Type of chest pain. | 1 = typical angina  2 = atypical angina  3 = non-anginal pain  4 = asymptomatic |
| trestbps | Resting blood pressure. | Values are given in mmHg |
| chol | Serum cholesterol. | Values are given in mg/dl |
| fbs | If fasting blood pressure is greater than 120 mg/dl. | 1 = true  0 = false |
| restecg | Resting ecg results. | 0 = normal  1 = having ST-T wave abnormality  2 = showing probable or definite left ventricular hypertrophy by Estes' criteria |
| thalach | Maximum heart rate achieved. | none |
| exang | Exercise induced angina. | 1 = yes  0 = no |
| oldpeak | ST depression induced by exercise relative to rest. | none |
| slope | Slope of the peak exercise ST segment. | 1 = upsloping  2 = flat  3 = down sloping |
| ca | Number of major vessels (0-3) colored by fluoroscopy. | none |
| thal |  | 3 = normal  6 = fixed defect  7 = reversible defect |
| target | Presence of heart disease. | 0 = yes disease  1 = no disease |