alcohol <= 10.35 entropy = 1.434 samples = 639 value = [87, 297, 255] class = Medium
True
False
sulphates <= 0.575 entropy = 1.067 samples = 345 value = [11, 231, 103] class = Medium
alcohol <= 11.55 entropy = 1.48 samples = 294 value = [76, 66, 152] class = High
total sulfur dioxide <= 24.5 entropy = 0.58 samples = 130 value = [0, 112, 18] class = Medium
volatile acidity <= 0.375 entropy = 1.221 samples = 215 value = [11, 119, 85] class = Medium
volatile acidity <= 0.363 entropy = 1.433 samples = 188 value = [29, 61, 98] class = High
sulphates <= 0.645 entropy = 1.224 samples = 106 value = [47, 5, 54] class = High
entropy = 0.0 samples = 25 value = [0, 25, 0] class = Medium
density <= 0.997 entropy = 0.661 samples = 105 value = [0, 87, 18] class = Medium
alcohol <= 9.75 entropy = 1.227 samples = 37 value = [5, 7, 25] class = High
total sulfur dioxide <= 54.5 entropy = 1.114 samples = 178 value = [6, 112, 60] class = Medium
alcohol <= 11.25 entropy = 1.442 samples = 36 value = [16, 5, 15] class = Low
residual sugar <= 3.05 entropy = 1.311 samples = 152 value = [13, 56, 83] class = High
fixed acidity <= 6.35 entropy = 1.125 samples = 42 value = [8, 4, 30] class = High
fixed acidity <= 12.95 entropy = 1.06 samples = 64 value = [39, 1, 24] class = Low
fixed acidity <= 7.65 entropy = 0.811 samples = 60 value = [0, 45, 15] class = Medium
alcohol <= 9.05 entropy = 0.353 samples = 45 value = [0, 42, 3] class = Medium
density <= 0.999 entropy = 1.121 samples = 23 value = [1, 7, 15] class = High
sulphates <= 1.025 entropy = 0.863 samples = 14 value = [4, 0, 10] class = High
volatile acidity <= 0.695 entropy = 1.236 samples = 115 value = [6, 60, 49] class = Medium
total sulfur dioxide <= 103.5 entropy = 0.668 samples = 63 value = [0, 52, 11] class = Medium
total sulfur dioxide <= 60.0 entropy = 1.284 samples = 28 value = [11, 2, 15] class = High
chlorides <= 0.062 entropy = 0.954 samples = 8 value = [5, 3, 0] class = Low
pH <= 3.515 entropy = 1.181 samples = 129 value = [6, 46, 77] class = High
citric acid <= 0.405 entropy = 1.55 samples = 23 value = [7, 10, 6] class = Medium
free sulfur dioxide <= 14.0 entropy = 0.971 samples = 10 value = [0, 4, 6] class = High
pH <= 3.265 entropy = 0.811 samples = 32 value = [8, 0, 24] class = High
free sulfur dioxide <= 18.5 entropy = 0.934 samples = 60 value = [39, 0, 21] class = Low
total sulfur dioxide <= 59.0 entropy = 0.811 samples = 4 value = [0, 1, 3] class = High
volatile acidity <= 0.515 entropy = 0.503 samples = 36 value = [0, 32, 4] class = Medium
citric acid <= 0.16 entropy = 0.995 samples = 24 value = [0, 13, 11] class = Medium
citric acid <= 0.23 entropy = 0.918 samples = 3 value = [0, 1, 2] class = High
citric acid <= 0.125 entropy = 0.162 samples = 42 value = [0, 41, 1] class = Medium
density <= 0.997 entropy = 0.567 samples = 15 value = [0, 2, 13] class = High
fixed acidity <= 11.0 entropy = 1.299 samples = 8 value = [1, 5, 2] class = Medium
density <= 0.997 entropy = 0.65 samples = 12 value = [2, 0, 10] class = High
entropy = 0.0 samples = 2 value = [2, 0, 0] class = Low
citric acid <= 0.315 entropy = 1.228 samples = 105 value = [5, 51, 49] class = Medium
volatile acidity <= 0.888 entropy = 0.469 samples = 10 value = [1, 9, 0] class = Medium
density <= 1.003 entropy = 0.811 samples = 44 value = [0, 33, 11] class = Medium
entropy = 0.0 samples = 19 value = [0, 19, 0] class = Medium
residual sugar <= 2.35 entropy = 0.994 samples = 22 value = [10, 0, 12] class = High
total sulfur dioxide <= 68.5 entropy = 1.459 samples = 6 value = [1, 2, 3] class = High
pH <= 3.16 entropy = 0.811 samples = 4 value = [1, 3, 0] class = Medium
entropy = 0.0 samples = 4 value = [4, 0, 0] class = Low
sulphates <= 0.525 entropy = 1.113 samples = 110 value = [5, 32, 73] class = High
free sulfur dioxide <= 10.5 entropy = 1.021 samples = 19 value = [1, 14, 4] class = Medium
pH <= 3.365 entropy = 1.531 samples = 14 value = [5, 3, 6] class = High
residual sugar <= 3.925 entropy = 0.764 samples = 9 value = [2, 7, 0] class = Medium
entropy = 0.0 samples = 4 value = [0, 4, 0] class = Medium
entropy = 0.0 samples = 6 value = [0, 0, 6] class = High
density <= 0.994 entropy = 1.0 samples = 12 value = [6, 0, 6] class = Low
fixed acidity <= 6.9 entropy = 0.469 samples = 20 value = [2, 0, 18] class = High
density <= 0.995 entropy = 0.732 samples = 39 value = [31.0, 0.0, 8.0] class = Low
pH <= 3.36 entropy = 0.959 samples = 21 value = [8, 0, 13] class = High
entropy = 0.0 samples = 3 value = [0, 0, 3] class = High
entropy = 0.0 samples = 1 value = [0, 1, 0] class = Medium
sulphates <= 0.505 entropy = 0.837 samples = 15 value = [0, 11, 4] class = Medium
entropy = 0.0 samples = 21 value = [0, 21, 0] class = Medium
citric acid <= 0.03 entropy = 0.918 samples = 12 value = [0, 4, 8] class = High
density <= 0.997 entropy = 0.811 samples = 12 value = [0, 9, 3] class = Medium
entropy = 0.0 samples = 1 value = [0, 1, 0] class = Medium
entropy = 0.0 samples = 2 value = [0, 0, 2] class = High
pH <= 3.335 entropy = 0.544 samples = 8 value = [0, 7, 1] class = Medium
entropy = 0.0 samples = 34 value = [0, 34, 0] class = Medium
pH <= 3.285 entropy = 0.971 samples = 5 value = [0, 2, 3] class = High
entropy = 0.0 samples = 10 value = [0, 0, 10] class = High
entropy = 0.0 samples = 5 value = [0, 5, 0] class = Medium
free sulfur dioxide <= 8.0 entropy = 0.918 samples = 3 value = [1, 0, 2] class = High
entropy = 0.0 samples = 2 value = [2, 0, 0] class = Low
entropy = 0.0 samples = 10 value = [0, 0, 10] class = High
residual sugar <= 1.85 entropy = 0.997 samples = 73 value = [0, 34, 39] class = High
alcohol <= 9.65 entropy = 1.428 samples = 32 value = [5, 17, 10] class = Medium
entropy = 0.0 samples = 9 value = [0, 9, 0] class = Medium
entropy = 0.0 samples = 1 value = [1, 0, 0] class = Low
citric acid <= 0.305 entropy = 0.75 samples = 42 value = [0, 33, 9] class = Medium
entropy = 0.0 samples = 2 value = [0, 0, 2] class = High
volatile acidity <= 0.335 entropy = 0.961 samples = 13 value = [8, 0, 5] class = Low
density <= 0.999 entropy = 0.764 samples = 9 value = [2, 0, 7] class = High
sulphates <= 0.855 entropy = 0.918 samples = 3 value = [1, 2, 0] class = Medium
entropy = 0.0 samples = 3 value = [0, 0, 3] class = High
entropy = 0.0 samples = 1 value = [1, 0, 0] class = Low
entropy = 0.0 samples = 3 value = [0, 3, 0] class = Medium
residual sugar <= 2.0 entropy = 0.684 samples = 11 value = [0, 9, 2] class = Medium
total sulfur dioxide <= 105.5 entropy = 1.051 samples = 99 value = [5, 23, 71] class = High
entropy = 0.0 samples = 10 value = [0, 10, 0] class = Medium
fixed acidity <= 7.15 entropy = 1.392 samples = 9 value = [1, 4, 4] class = Medium
density <= 0.994 entropy = 0.592 samples = 7 value = [1, 0, 6] class = High
volatile acidity <= 0.67 entropy = 0.985 samples = 7 value = [4, 3, 0] class = Low
entropy = 0.0 samples = 2 value = [2, 0, 0] class = Low
entropy = 0.0 samples = 7 value = [0, 7, 0] class = Medium
residual sugar <= 1.3 entropy = 0.722 samples = 5 value = [4, 0, 1] class = Low
density <= 0.996 entropy = 0.863 samples = 7 value = [2, 0, 5] class = High
alcohol <= 12.25 entropy = 0.971 samples = 5 value = [2, 0, 3] class = High
entropy = 0.0 samples = 15 value = [0, 0, 15] class = High
entropy = 0.0 samples = 10 value = [10, 0, 0] class = Low
total sulfur dioxide <= 39.5 entropy = 0.85 samples = 29 value = [21, 0, 8] class = Low
residual sugar <= 2.55 entropy = 0.98 samples = 12 value = [7, 0, 5] class = Low
pH <= 3.7 entropy = 0.503 samples = 9 value = [1, 0, 8] class = High
entropy = 0.0 samples = 6 value = [0, 6, 0] class = Medium
chlorides <= 0.079 entropy = 0.991 samples = 9 value = [0, 5, 4] class = Medium
entropy = 0.0 samples = 2 value = [0, 2, 0] class = Medium
residual sugar <= 1.75 entropy = 0.722 samples = 10 value = [0, 2, 8] class = High
entropy = 0.0 samples = 6 value = [0, 6, 0] class = Medium
pH <= 3.185 entropy = 1.0 samples = 6 value = [0, 3, 3] class = Medium
entropy = 0.0 samples = 1 value = [0, 0, 1] class = High
entropy = 0.0 samples = 7 value = [0, 7, 0] class = Medium
entropy = 0.0 samples = 2 value = [0, 2, 0] class = Medium
entropy = 0.0 samples = 3 value = [0, 0, 3] class = High
entropy = 0.0 samples = 2 value = [0, 0, 2] class = High
entropy = 0.0 samples = 1 value = [1, 0, 0] class = Low
sulphates <= 0.69 entropy = 0.672 samples = 17 value = [0, 14, 3] class = Medium
free sulfur dioxide <= 5.5 entropy = 0.94 samples = 56 value = [0, 20, 36] class = High
total sulfur dioxide <= 34.5 entropy = 0.881 samples = 20 value = [0, 14, 6] class = Medium
chlorides <= 0.091 entropy = 1.555 samples = 12 value = [5, 3, 4] class = Low
volatile acidity <= 0.662 entropy = 0.906 samples = 28 value = [0, 19, 9] class = Medium
entropy = 0.0 samples = 14 value = [0, 14, 0] class = Medium
density <= 0.995 entropy = 0.991 samples = 9 value = [4, 0, 5] class = High
entropy = 0.0 samples = 4 value = [4, 0, 0] class = Low
entropy = 0.0 samples = 7 value = [0, 0, 7] class = High
entropy = 0.0 samples = 2 value = [2, 0, 0] class = Low
entropy = 0.0 samples = 2 value = [0, 2, 0] class = Medium
entropy = 0.0 samples = 1 value = [1, 0, 0] class = Low
citric acid <= 0.25 entropy = 0.918 samples = 3 value = [0, 1, 2] class = High
entropy = 0.0 samples = 8 value = [0, 8, 0] class = Medium
volatile acidity <= 0.595 entropy = 1.002 samples = 95 value = [5, 19, 71] class = High
entropy = 0.0 samples = 4 value = [0, 4, 0] class = Medium
density <= 0.994 entropy = 1.0 samples = 8 value = [0, 4, 4] class = Medium
entropy = 0.0 samples = 1 value = [1, 0, 0] class = Low
entropy = 0.0 samples = 1 value = [1, 0, 0] class = Low
entropy = 0.0 samples = 6 value = [0, 0, 6] class = High
entropy = 0.0 samples = 4 value = [4, 0, 0] class = Low
entropy = 0.0 samples = 3 value = [0, 3, 0] class = Medium
entropy = 0.0 samples = 1 value = [0, 0, 1] class = High
entropy = 0.0 samples = 4 value = [4, 0, 0] class = Low
entropy = 0.0 samples = 5 value = [0, 0, 5] class = High
entropy = 0.0 samples = 2 value = [2, 0, 0] class = Low
entropy = 0.0 samples = 2 value = [0, 0, 2] class = High
citric acid <= 0.015 entropy = 0.918 samples = 3 value = [2, 0, 1] class = Low
pH <= 3.33 entropy = 0.764 samples = 27 value = [21, 0, 6] class = Low
entropy = 0.0 samples = 2 value = [0, 0, 2] class = High
alcohol <= 11.85 entropy = 0.954 samples = 8 value = [3, 0, 5] class = High
entropy = 0.0 samples = 4 value = [4, 0, 0] class = Low
entropy = 0.0 samples = 8 value = [0, 0, 8] class = High
entropy = 0.0 samples = 1 value = [1, 0, 0] class = Low
entropy = 0.0 samples = 3 value = [0, 0, 3] class = High
alcohol <= 10.05 entropy = 0.65 samples = 6 value = [0, 5, 1] class = Medium
free sulfur dioxide <= 12.0 entropy = 1.0 samples = 4 value = [0, 2, 2] class = Medium
entropy = 0.0 samples = 6 value = [0, 0, 6] class = High
entropy = 0.0 samples = 2 value = [0, 2, 0] class = Medium
chlorides <= 0.074 entropy = 0.811 samples = 4 value = [0, 1, 3] class = High
entropy = 0.0 samples = 11 value = [0, 11, 0] class = Medium
pH <= 3.285 entropy = 1.0 samples = 6 value = [0, 3, 3] class = Medium
entropy = 0.0 samples = 4 value = [0, 4, 0] class = Medium
alcohol <= 9.55 entropy = 0.89 samples = 52 value = [0, 16, 36] class = High
chlorides <= 0.08 entropy = 0.971 samples = 10 value = [0, 4, 6] class = High
entropy = 0.0 samples = 10 value = [0, 10, 0] class = Medium
total sulfur dioxide <= 48.5 entropy = 0.918 samples = 6 value = [2, 0, 4] class = High
pH <= 3.305 entropy = 1.0 samples = 6 value = [3, 3, 0] class = Low
density <= 0.997 entropy = 1.0 samples = 16 value = [0, 8, 8] class = Medium
total sulfur dioxide <= 102.5 entropy = 0.414 samples = 12 value = [0, 11, 1] class = Medium
entropy = 0.0 samples = 3 value = [0, 0, 3] class = High
volatile acidity <= 0.255 entropy = 0.918 samples = 6 value = [4, 0, 2] class = Low
entropy = 0.0 samples = 2 value = [0, 0, 2] class = High
entropy = 0.0 samples = 1 value = [0, 1, 0] class = Medium
citric acid <= 0.15 entropy = 0.964 samples = 64 value = [5, 9, 50] class = High
density <= 0.996 entropy = 0.907 samples = 31 value = [0, 10, 21] class = High
entropy = 0.0 samples = 2 value = [0, 2, 0] class = Medium
fixed acidity <= 6.6 entropy = 0.918 samples = 6 value = [0, 2, 4] class = High
entropy = 0.0 samples = 1 value = [0, 0, 1] class = High
entropy = 0.0 samples = 2 value = [2, 0, 0] class = Low
alcohol <= 12.2 entropy = 0.937 samples = 17 value = [11, 0, 6] class = Low
entropy = 0.0 samples = 10 value = [10, 0, 0] class = Low
entropy = 0.0 samples = 2 value = [2, 0, 0] class = Low
sulphates <= 0.845 entropy = 0.65 samples = 6 value = [1, 0, 5] class = High
entropy = 0.0 samples = 5 value = [0, 5, 0] class = Medium
entropy = 0.0 samples = 1 value = [0, 0, 1] class = High
entropy = 0.0 samples = 2 value = [0, 0, 2] class = High
entropy = 0.0 samples = 2 value = [0, 2, 0] class = Medium
entropy = 0.0 samples = 1 value = [0, 1, 0] class = Medium
entropy = 0.0 samples = 3 value = [0, 0, 3] class = High
entropy = 0.0 samples = 3 value = [0, 3, 0] class = Medium
entropy = 0.0 samples = 3 value = [0, 0, 3] class = High
density <= 0.998 entropy = 0.454 samples = 21 value = [0, 2, 19] class = High
alcohol <= 9.85 entropy = 0.993 samples = 31 value = [0, 14, 17] class = High
entropy = 0.0 samples = 4 value = [0, 4, 0] class = Medium
entropy = 0.0 samples = 6 value = [0, 0, 6] class = High
entropy = 0.0 samples = 4 value = [0, 0, 4] class = High
entropy = 0.0 samples = 2 value = [2, 0, 0] class = Low
density <= 0.999 entropy = 0.811 samples = 4 value = [3, 1, 0] class = Low
entropy = 0.0 samples = 2 value = [0, 2, 0] class = Medium
chlorides <= 0.075 entropy = 0.592 samples = 7 value = [0, 1, 6] class = High
volatile acidity <= 0.575 entropy = 0.764 samples = 9 value = [0, 7, 2] class = Medium
entropy = 0.0 samples = 11 value = [0, 11, 0] class = Medium
entropy = 0.0 samples = 1 value = [0, 0, 1] class = High
entropy = 0.0 samples = 3 value = [3, 0, 0] class = Low
total sulfur dioxide <= 9.0 entropy = 0.918 samples = 3 value = [1, 0, 2] class = High
volatile acidity <= 0.575 entropy = 0.286 samples = 20 value = [1, 0, 19] class = High
citric acid <= 0.295 entropy = 1.139 samples = 44 value = [4, 9, 31] class = High
entropy = 0.0 samples = 14 value = [0, 0, 14] class = High
sulphates <= 0.72 entropy = 0.977 samples = 17 value = [0, 10, 7] class = Medium
entropy = 0.0 samples = 4 value = [0, 0, 4] class = High
entropy = 0.0 samples = 2 value = [0, 2, 0] class = Medium
density <= 0.995 entropy = 0.75 samples = 14 value = [11, 0, 3] class = Low
entropy = 0.0 samples = 3 value = [0, 0, 3] class = High
entropy = 0.0 samples = 5 value = [0, 0, 5] class = High
entropy = 0.0 samples = 1 value = [1, 0, 0] class = Low
entropy = 0.0 samples = 13 value = [0, 0, 13] class = High
sulphates <= 0.635 entropy = 0.811 samples = 8 value = [0, 2, 6] class = High
residual sugar <= 2.05 entropy = 0.684 samples = 11 value = [0, 9, 2] class = Medium
free sulfur dioxide <= 20.0 entropy = 0.811 samples = 20 value = [0, 5, 15] class = High
entropy = 0.0 samples = 3 value = [3, 0, 0] class = Low
entropy = 0.0 samples = 1 value = [0, 1, 0] class = Medium
entropy = 0.0 samples = 1 value = [0, 1, 0] class = Medium
entropy = 0.0 samples = 6 value = [0, 0, 6] class = High
entropy = 0.0 samples = 6 value = [0, 6, 0] class = Medium
sulphates <= 0.675 entropy = 0.918 samples = 3 value = [0, 1, 2] class = High
entropy = 0.0 samples = 1 value = [1, 0, 0] class = Low
entropy = 0.0 samples = 2 value = [0, 0, 2] class = High
entropy = 0.0 samples = 18 value = [0, 0, 18] class = High
total sulfur dioxide <= 27.0 entropy = 1.0 samples = 2 value = [1, 0, 1] class = Low
volatile acidity <= 0.485 entropy = 1.272 samples = 16 value = [1, 7, 8] class = High
free sulfur dioxide <= 25.5 entropy = 0.85 samples = 28 value = [3, 2, 23] class = High
alcohol <= 10.75 entropy = 0.918 samples = 15 value = [0, 10, 5] class = Medium
entropy = 0.0 samples = 2 value = [0, 0, 2] class = High
entropy = 0.0 samples = 1 value = [0, 0, 1] class = High
sulphates <= 0.885 entropy = 0.619 samples = 13 value = [11, 0, 2] class = Low
sulphates <= 0.6 entropy = 0.918 samples = 3 value = [0, 2, 1] class = Medium
entropy = 0.0 samples = 5 value = [0, 0, 5] class = High
entropy = 0.0 samples = 7 value = [0, 7, 0] class = Medium
volatile acidity <= 0.635 entropy = 1.0 samples = 4 value = [0, 2, 2] class = Medium
density <= 0.997 entropy = 0.94 samples = 14 value = [0, 5, 9] class = High
entropy = 0.0 samples = 6 value = [0, 0, 6] class = High
entropy = 0.0 samples = 2 value = [0, 0, 2] class = High
entropy = 0.0 samples = 1 value = [0, 1, 0] class = Medium
entropy = 0.0 samples = 1 value = [1, 0, 0] class = Low
entropy = 0.0 samples = 1 value = [0, 0, 1] class = High
residual sugar <= 1.75 entropy = 0.946 samples = 11 value = [0, 7, 4] class = Medium
free sulfur dioxide <= 4.0 entropy = 0.722 samples = 5 value = [1, 0, 4] class = High
chlorides <= 0.074 entropy = 0.544 samples = 24 value = [3, 0, 21] class = High
total sulfur dioxide <= 61.5 entropy = 1.0 samples = 4 value = [0, 2, 2] class = Medium
citric acid <= 0.13 entropy = 0.991 samples = 9 value = [0, 4, 5] class = High
entropy = 0.0 samples = 6 value = [0, 6, 0] class = Medium
volatile acidity <= 0.25 entropy = 0.414 samples = 12 value = [11, 0, 1] class = Low
entropy = 0.0 samples = 1 value = [0, 0, 1] class = High
entropy = 0.0 samples = 1 value = [0, 0, 1] class = High
entropy = 0.0 samples = 2 value = [0, 2, 0] class = Medium
entropy = 0.0 samples = 2 value = [0, 0, 2] class = High
entropy = 0.0 samples = 2 value = [0, 2, 0] class = Medium
density <= 0.996 entropy = 1.0 samples = 10 value = [0, 5, 5] class = Medium
entropy = 0.0 samples = 4 value = [0, 0, 4] class = High
entropy = 0.0 samples = 2 value = [0, 0, 2] class = High
residual sugar <= 2.45 entropy = 0.764 samples = 9 value = [0, 7, 2] class = Medium
entropy = 0.0 samples = 1 value = [1, 0, 0] class = Low
entropy = 0.0 samples = 4 value = [0, 0, 4] class = High
fixed acidity <= 8.85 entropy = 0.845 samples = 11 value = [3, 0, 8] class = High
entropy = 0.0 samples = 13 value = [0, 0, 13] class = High
entropy = 0.0 samples = 2 value = [0, 2, 0] class = Medium
entropy = 0.0 samples = 2 value = [0, 0, 2] class = High
residual sugar <= 2.95 entropy = 0.65 samples = 6 value = [0, 1, 5] class = High
entropy = 0.0 samples = 3 value = [0, 3, 0] class = Medium
entropy = 0.0 samples = 1 value = [0, 0, 1] class = High
entropy = 0.0 samples = 11 value = [11, 0, 0] class = Low
entropy = 0.0 samples = 3 value = [0, 0, 3] class = High
sulphates <= 0.585 entropy = 0.863 samples = 7 value = [0, 5, 2] class = Medium
entropy = 0.0 samples = 7 value = [0, 7, 0] class = Medium
entropy = 0.0 samples = 2 value = [0, 0, 2] class = High
entropy = 0.0 samples = 2 value = [2, 0, 0] class = Low
pH <= 2.99 entropy = 0.503 samples = 9 value = [1, 0, 8] class = High
entropy = 0.0 samples = 5 value = [0, 0, 5] class = High
entropy = 0.0 samples = 1 value = [0, 1, 0] class = Medium
entropy = 0.0 samples = 1 value = [0, 0, 1] class = High
total sulfur dioxide <= 21.0 entropy = 0.65 samples = 6 value = [0, 5, 1] class = Medium
entropy = 0.0 samples = 1 value = [1, 0, 0] class = Low
entropy = 0.0 samples = 8 value = [0, 0, 8] class = High
entropy = 0.0 samples = 1 value = [0, 0, 1] class = High
entropy = 0.0 samples = 5 value = [0, 5, 0] class = Medium