1. 功能实现

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 属性（特征） | Alcohol | Malic acid | Ash | Alcalinity of ash | Magnesium | Total phenols | Flavanoids |
|  |  |  |  |  |  |  |  |
| 属性（特征） | Nonflavanoid phenols | Proanthocyanins |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

部分样本表

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 属  性  1 | 属性  2 | 属性  3 | 属性  4 | 属性  5 | 属性  6 | 属性  7 | 属性  8 | 属性  9 | 属性  10 | 属性  11 | 属性  12 | 属性  13 | 类别 |
| 14.23 | 1.71 | 2.43 | 15.6 | 127 | 2.8 | 3.06 | .28 | 2.29 | 5.64 | 1.04 | 3.92 | 1065 | 1 |
| 13.2 | 1.78 | 2.14 | 11.2 | 100 | 2.65 | 2.76 | .26 | 1.28 | 4.38 | 1.05 | 3.4 | 1050 | 1 |
| 13.16 | 2.36 | 2.67 | 18.6 | 101 | 2.8 | 3.24 | .3 | 2.81 | 5.68 | 1.03 | 3.17 | 1185 | 1 |
| 14.37 | 1.95 | 2.5 | 16.8 | 113 | 3.85 | 3.49 | .24 | 2.18 | 7.8 | .86 | 3.45 | 1480 | 1 |
| 13.24 | 2.59 | 2.87 | 21 | 118 | 2.8 | 2.69 | .39 | 1.82 | 4.32 | 1.04 | 2.93 | 735 | 1 |
| 14.2 | 1.76 | 2.45 | 15.2 | 112 | 3.27 | 3.39 | .34 | 1.97 | 6.75 | 1.05 | 2.85 | 1450 | 1 |
| 14.39 | 1.87 | 2.45 | 14.6 | 96 | 2.5 | 2.52 | .3 | 1.98 | 5.25 | 1.02 | 3.58 | 1290 | 1 |
| 12.37 | .94 | 1.36 | 10.6 | 88 | 1.98 | .57 | .28 | .42 | 1.95 | 1.05 | 1.82 | 520 | 2 |
| 12.33 | 1.1 | 2.28 | 16 | 101 | 2.05 | 1.09 | .63 | .41 | 3.27 | 1.25 | 1.67 | 680 | 2 |
| 12.64 | 1.36 | 2.02 | 16.8 | 100 | 2.02 | 1.41 | .53 | .62 | 5.75 | .98 | 1.59 | 450 | 2 |
| 13.67 | 1.25 | 1.92 | 18 | 94 | 2.1 | 1.79 | .32 | .73 | 3.8 | 1.23 | 2.46 | 630 | 2 |
| 12.37 | 1.13 | 2.16 | 19 | 87 | 3.5 | 3.1 | .19 | 1.87 | 4.45 | 1.22 | 2.87 | 420 | 2 |
| 12.17 | 1.45 | 2.53 | 19 | 104 | 1.89 | 1.75 | .45 | 1.03 | 2.95 | 1.45 | 2.23 | 355 | 2 |
| 12.37 | 1.21 | 2.56 | 18.1 | 98 | 2.42 | 2.65 | .37 | 2.08 | 4.6 | 1.19 | 2.3 | 678 | 2 |
| 12.86 | 1.35 | 2.32 | 18 | 122 | 1.51 | 1.25 | .21 | .94 | 4.1 | .76 | 1.29 | 630 | 3 |
| 12.88 | 2.99 | 2.4 | 20 | 104 | 1.3 | 1.22 | .24 | .83 | 5.4 | .74 | 1.42 | 530 | 3 |
| 12.81 | 2.31 | 2.4 | 24 | 98 | 1.15 | 1.09 | .27 | .83 | 5.7 | .66 | 1.36 | 560 | 3 |
| 12.7 | 3.55 | 2.36 | 21.5 | 106 | 1.7 | 1.2 | .17 | .84 | 5 | .78 | 1.29 | 600 | 3 |
| 12.51 | 1.24 | 2.25 | 17.5 | 85 | 2 | .58 | .6 | 1.25 | 5.45 | .75 | 1.51 | 650 | 3 |

1. C4.5算法对UCI wine数据集分类的实现







