LBP(8,2)+PCA(n=150)+SVM

precision recall f1-score support

Ariel Sharon 0.80 0.62 0.70 13

Colin Powell 0.96 0.75 0.84 60

Donald Rumsfeld 0.85 0.63 0.72 27

George W Bush 0.77 0.99 0.86 146

Gerhard Schroeder 0.81 0.68 0.74 25

Hugo Chavez 0.86 0.40 0.55 15

Tony Blair 0.97 0.78 0.86 36

avg / total 0.84 0.82 0.82 322

[[ 8 0 0 5 0 0 0]

[ 0 45 1 13 1 0 0]

[ 1 0 17 8 0 0 1]

[ 0 0 1 144 0 1 0]

[ 0 1 0 7 17 0 0]

[ 1 1 0 6 1 6 0]

[ 0 0 1 5 2 0 28]]

原始特征+PCA(n=150)+SVM

precision recall f1-score support

Ariel Sharon 0.75 0.46 0.57 13

Colin Powell 0.80 0.87 0.83 60

Donald Rumsfeld 0.89 0.63 0.74 27

George W Bush 0.83 0.98 0.90 146

Gerhard Schroeder 0.95 0.80 0.87 25

Hugo Chavez 1.00 0.47 0.64 15

Tony Blair 0.97 0.78 0.86 36

avg / total 0.86 0.85 0.84 322

[[ 6 2 0 5 0 0 0]

[ 1 52 1 6 0 0 0]

[ 1 2 17 7 0 0 0]

[ 0 3 0 143 0 0 0]

[ 0 1 0 3 20 0 1]

[ 0 4 0 3 1 7 0]

[ 0 1 1 6 0 0 28]]

原始特征+LDA(n=150)+SVM

precision recall f1-score support

Ariel Sharon 0.46 0.46 0.46 13

Colin Powell 0.69 0.68 0.69 60

Donald Rumsfeld 0.44 0.56 0.49 27

George W Bush 0.89 0.78 0.83 146

Gerhard Schroeder 0.62 0.72 0.67 25

Hugo Chavez 0.45 0.60 0.51 15

Tony Blair 0.59 0.64 0.61 36

avg / total 0.72 0.70 0.71 322

[[ 6 2 3 1 1 0 0]

[ 3 41 3 5 2 4 2]

[ 2 1 15 3 0 1 5]

[ 1 10 10 114 2 2 7]

[ 0 1 1 1 18 3 1]

[ 0 0 1 2 2 9 1]

[ 1 4 1 2 4 1 23]]

LBP(8,2)+LDA(n=150)+SVM

precision recall f1-score support

Ariel Sharon 0.57 0.62 0.59 13

Colin Powell 0.67 0.73 0.70 60

Donald Rumsfeld 0.48 0.59 0.53 27

George W Bush 0.87 0.81 0.84 146

Gerhard Schroeder 0.57 0.68 0.62 25

Hugo Chavez 0.67 0.40 0.50 15

Tony Blair 0.71 0.69 0.70 36

avg / total 0.74 0.73 0.73 322

[[ 8 2 3 0 0 0 0]

[ 3 44 5 4 0 1 3]

[ 1 3 16 4 1 0 2]

[ 1 6 5 118 10 2 4]

[ 0 6 1 0 17 0 1]

[ 0 4 0 4 1 6 0]

[ 1 1 3 5 1 0 25]]

ORL pca +SVM

precision recall f1-score support

0 0.00 0.00 0.00 4

1 0.50 1.00 0.67 2

2 0.67 1.00 0.80 2

3 1.00 1.00 1.00 4

4 1.00 0.33 0.50 3

5 1.00 0.67 0.80 3

6 1.00 1.00 1.00 1

7 1.00 0.43 0.60 7

8 0.67 1.00 0.80 2

9 0.60 1.00 0.75 3

10 0.50 0.33 0.40 3

11 0.57 1.00 0.73 4

12 1.00 0.50 0.67 2

13 1.00 1.00 1.00 1

14 1.00 1.00 1.00 3

15 0.00 0.00 0.00 2

16 0.00 0.00 0.00 0

17 0.75 1.00 0.86 3

18 1.00 1.00 1.00 2

19 0.25 1.00 0.40 1

20 1.00 0.50 0.67 2

21 0.50 1.00 0.67 1

22 1.00 1.00 1.00 4

23 0.50 0.50 0.50 4

24 1.00 1.00 1.00 2

25 0.67 1.00 0.80 2

26 0.00 0.00 0.00 4

27 0.60 1.00 0.75 3

28 0.14 0.50 0.22 2

29 0.50 1.00 0.67 1

30 1.00 1.00 1.00 1

31 0.00 0.00 0.00 1

32 1.00 0.33 0.50 3

33 1.00 1.00 1.00 2

34 1.00 1.00 1.00 1

35 0.00 0.00 0.00 1

36 1.00 1.00 1.00 2

37 1.00 1.00 1.00 3

38 1.00 0.40 0.57 5

39 1.00 1.00 1.00 4

avg / total 0.73 0.69 0.67 100

ORL人脸库识别结果

|  |  |  |
| --- | --- | --- |
| PCA+SVM | VGG16 | LDA+SVM |
| 0.74 | 0.975 | 0.98 |