table =

7296.6 7308.6 7239.9 7285.8 7228.6 7318.7 7349.0 7336.8 7239.4 7228.4

7268.7 7339.6 7263.0 7288.6 7246.8 7346.2 7374.8 7368.8 7258.7 7244.4

7267.9 7330.6 7289.6 7290.2 7243.7 7334.6 7374.7 7384.9 7266.8 7252.5

7270.3 7337.1 7272.2 7312.2 7246.9 7335.7 7373.2 7369.2 7273.4 7238.5

7261.1 7330.8 7281.2 7287.3 7265.5 7345.0 7356.0 7373.2 7258.6 7241.6

7248.3 7333.0 7270.9 7278.7 7254.7 7368.6 7359.1 7361.4 7245.3 7244.7

7271.7 7323.0 7255.1 7301.2 7232.9 7321.9 7398.0 7360.1 7275.9 7228.7

7270.4 7333.5 7275.5 7300.8 7262.4 7334.6 7367.1 7372.3 7267.4 7239.2

7278.2 7330.2 7262.2 7309.9 7242.3 7326.4 7384.7 7369.4 7286.7 7234.0

7244.9 7320.9 7275.0 7272.9 7247.9 7345.5 7354.4 7365.3 7249.7 7241.1

M =

7296.6 7339.6 7289.6 7312.2 7265.5 7368.6 7398.0 7384.9 7286.7 7252.5

I =

1 2 3 4 5 6 7 **3** 9 **3**

**So the errors are as follows:**

In 7th subject of T, the algorithm identifies 8 as 3 and identifies 0 as 3.

QR 代码

描述已自动生成 图表, 直方图

描述已自动生成

1. load digit.mat
2. who %show variables
3. size(X) %show size
4. size(T) %show size
5. %Computation of a common covariance matrix
6. [a b c] = size(X);
7. S = zeros(a);
8. mu = zeros(a,c);
9. for i=1:c
10. mu(:,i) = mean(X(:,:,i),2);
11. S = S+cov(X(:,:,i)');
12. end
13. S=S/c;
14. invS = inv(S);
15. table=[];
16. for i=1:10
17. a=[];
18. %prepare test data, 7-th subject
19. t=T(:,7,i);
20. for k=1:10
21. %posterior probability for digit "i"
22. p=t'\*invS\*mu(:,k)-mu(:,k)'\*invS\*mu(:,k)/2;
23. a=[a;p]
24. end
25. table=[table,a]
26. end
27. [M,I]=max(table)
28. imshow(reshape(T(:,7,10),[16 16])');