
```
function result=FeatureDetect(I)
```

feature detect method

input: I-thinned fingerprint image output: sparse feature points

```
[M, N] = size(I);
tmpI = padarray(I,[1 1], 'replicate', 'both');
m = 1;
n = 1;
result = ones(M,N)*255;
for i=(1+m):(M+m)
    for j = (1+n):(N+n)
        spot = tmpI(i-m:i+m,j-n:j+n);
        if spot(2,2) == 0 %central point has fingerprint
            %calc cross number
            CrossNum = (abs(spot(1,2)-spot(1,1))+abs(spot(1,3)-
spot(1,2)))+...
            abs(spot(2,3)-spot(1,3))+abs(spot(3,3)-spot(2,3))+...
            abs(spot(3,2)-spot(3,3))+abs(spot(3,1)-spot(3,2))+...
            abs(spot(2,1)-spot(3,1))+abs(spot(1,1)-spot(2,1)))/2;
            if CrossNum == 1
                result(i-m,j-n) = 0; % ending point
            elseif CrossNum ==3
                result(i-m,j-n) = 128; % bifurcation point
            end
        end
    end
end

end

end

Not enough input arguments.

Error in FeatureDetect (line 5)
[M, N] = size(I);

end
```

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