```matlab
function houghspace = Hough(bw,r_min,r_max,step_angle)

    [h,w] = size(bw);

    r_size = (r_max - r_min);

    angle_size = round(2*pi/step_angle);

    % 建立圆检测的霍夫空间

    houghspace = zeros(h,w,r_size);

    % 计算需要迭代的次数，即二值图像的白像素点个数

    [rows,cols] = find(bw);

    point_num = size(rows);

    % 霍夫变换

    % a = x - rcos(theta)

    % b = y - rsin(theta)

    for i = 1:point_num

        for j = 1:r_size

            for k = 1:angle_size

                a = round(rows(i)-(r_min+j-1)*cos(k*step_angle));

                b = round(cols(i)-(r_min+j-1)*sin(k*step_angle));

                if (a>0&&a<=h&&b>0&&b<=w)

                    houghspace(a,b,j) = houghspace(a,b,j) + 1;

                end

            end

        end

    end
```

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