Algorithm 1 Build R-Table

Require: Edges of the shape to detect

```
R ← 0 {Empty nested list}
y ← Reference point
for all x ∈ Edges do
    φ ← Direction of gradient at x
    r ← x − y
    Append R[φ] with r
end for
```

Algorithm 2 Detection

Require: Edges of image

```
A ← 0 {Empty 2D array of same size as the image}
R ← BuildRTable(Shape)
for all x ∈ Edges do
    φ ← Direction of gradient at x
    for all r in R[φ] do
        A[r] + +
    end for
end for
return LocalMaxima(A)
```