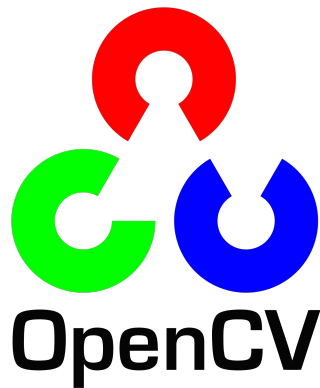
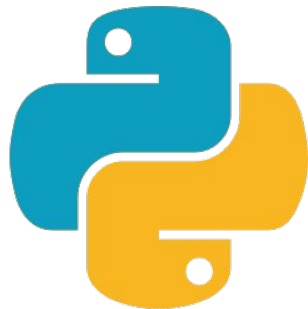


# Detecção de Bordas

Leonardo Oliveira

# Linguagem e bibliotecas utilizadas



# Implementação

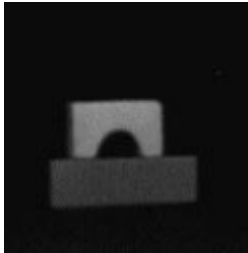
## Coisas prontas foram usados (Open cv):

- Filtro de colorido para escala de cinza
- Filtro de detecção de bordas Canny

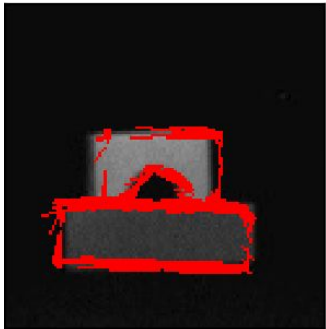
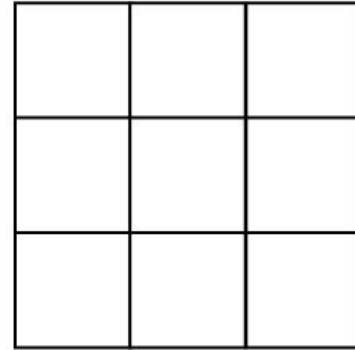
## Implementado:

- Cálculo da transformada de Hough
- Identificação dos picos da transformada
- Cálculo de cada ponto da reta, identificada pelos picos da transformada
- Identificação do segmento percorrendo a reta, através de verificação da vizinhança do pixel
- Desenhos dos segmentos

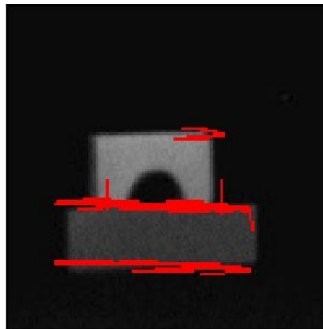
# Resultados



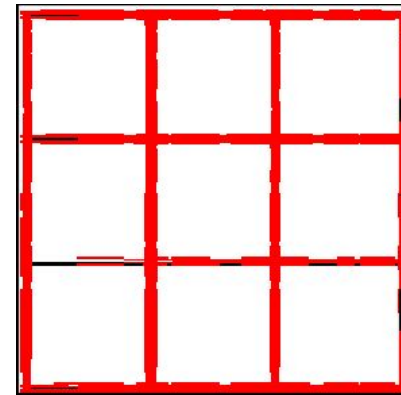
← Imagem original →



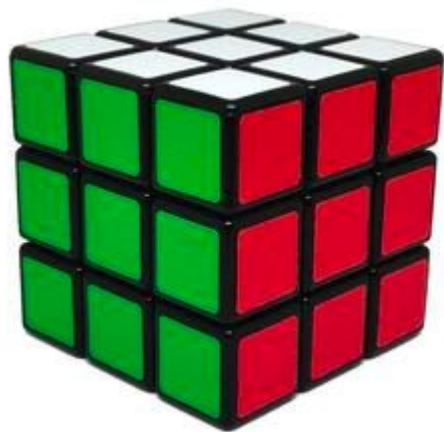
Mínimo de votação  
pequeno



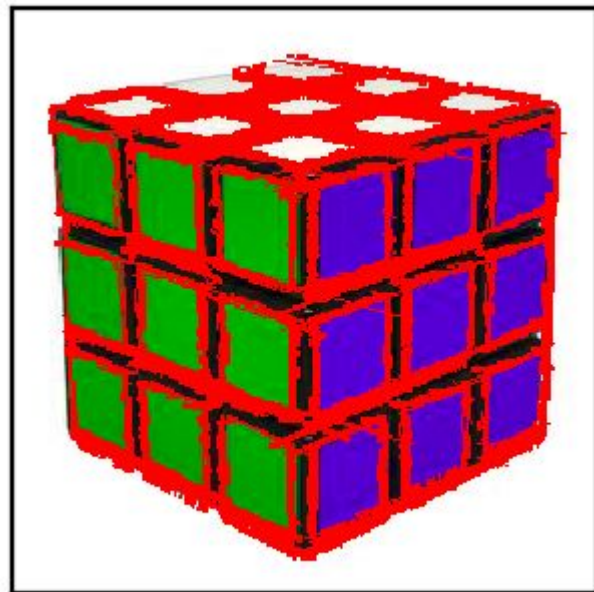
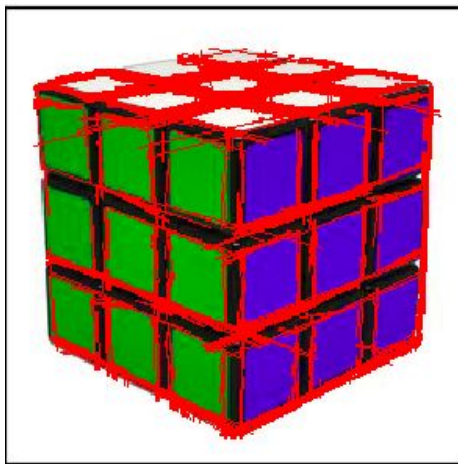
Mínimo de votação  
maior



# Resultados



Original



# Tela do programa

Imagem Original

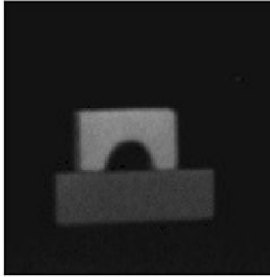
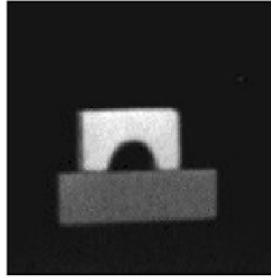


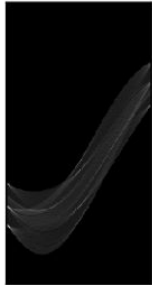
Imagem Cinza



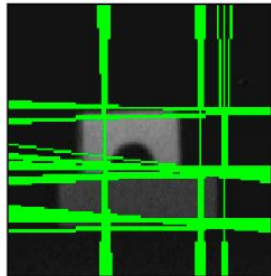
Aplicado o Canny



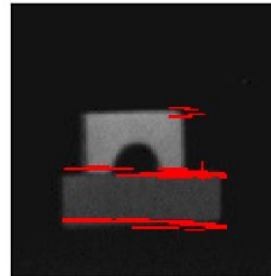
Transformada



Retas

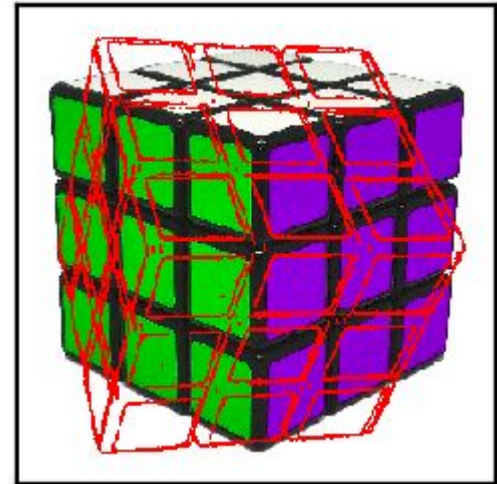


Segmentos



Foi necessário rotacionar a imagem em 90º e transladar no eixo x, o tamanho da largura da imagem

**Resultado sem rotacionar:**



Obrigado!

Email: [leosoliveira10@gmail.com](mailto:leosoliveira10@gmail.com)

Github: <https://github.com/Leoner42/PID-DeteccaoBordas>