Computer Vision Exercises

7: Features Extraction-Edge Detection

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Edge detection

1. Load the image baboon.png;

2. Use Matlab's edge function to compare the performance of various first order edge detection operators:

- Prewitt
- Sobel
- Canny operator

3. Compare the results between all detectors.

4. Investigate their response to the noise (e.g., introduce Gaussian noise in the image).

5. When necessary apply **hysteresis thresholding.** What happens?

Harris detector

1. Load the image castle.jpg;

2. Use Matlab's corner detection code (Harris algorithm) to detect the corners of the image. In your opinion, how accurate is the detection?

3. Rotate the image 35 degrees clockwise. Where the same corners detected?

4. Scale the image 3x and recall the Harris detector. Were the same corners detected? Why?