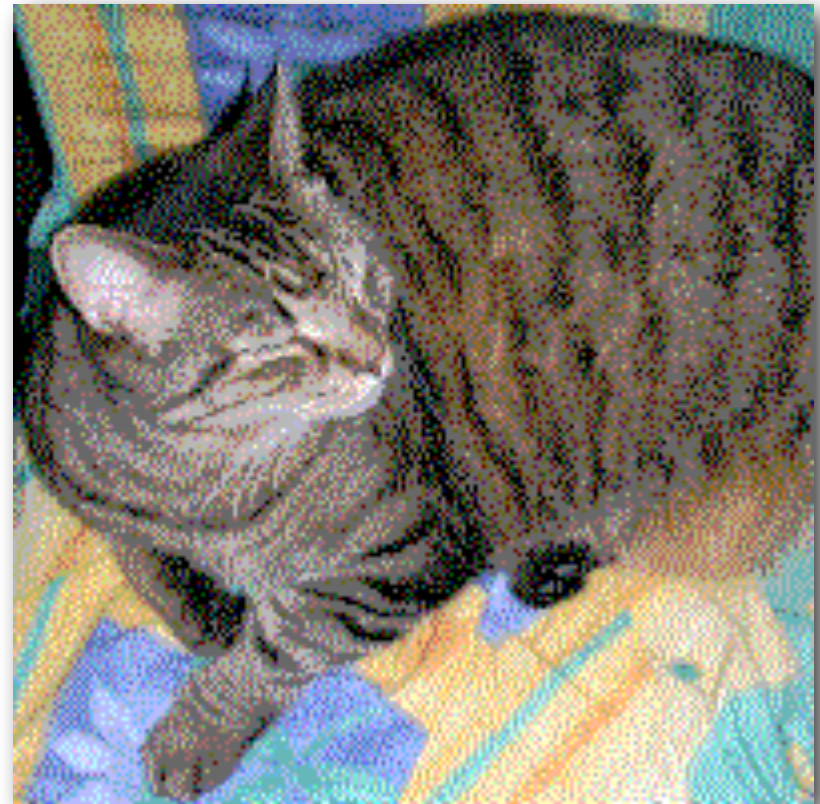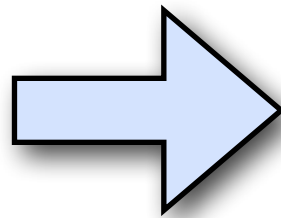# DAM Homework (3)

2018-10-23

Image Watermarking

- Implement Stenography

1. removing all but the last 2 bits of each color component
2. X 85

Stenography

- Watermarking
  - Input
    - Ic: a color image
    - Iw: a watermark image
      - i.e., binary image with watermark information
      - or low resolution color image
      - or you can try QR code image
  - Output
    - I'c: a watermarked image
- Detection:
  - Input
    - Ic: a watermarked color image
  - Output
    - Iw: a watermark image
- two command lines

bonus: a simple web based service

Constraints

- Use
  - **Node.JS** and **gm/OpenCV** library
  - or Python Image Library
- Deadline:
  - 2018-11-08

Bonus

- True watermarking:
  - slides 29
  - slides 31