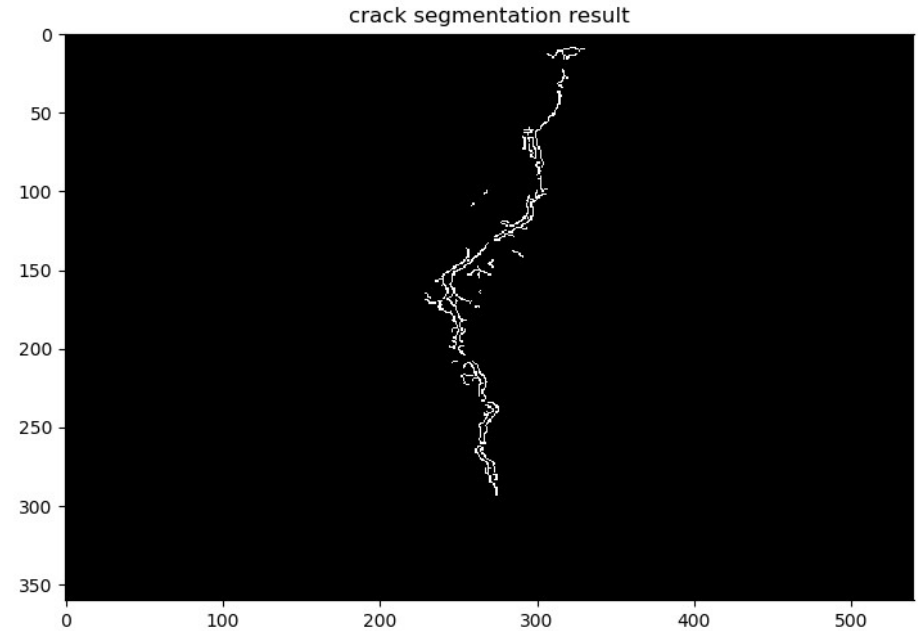
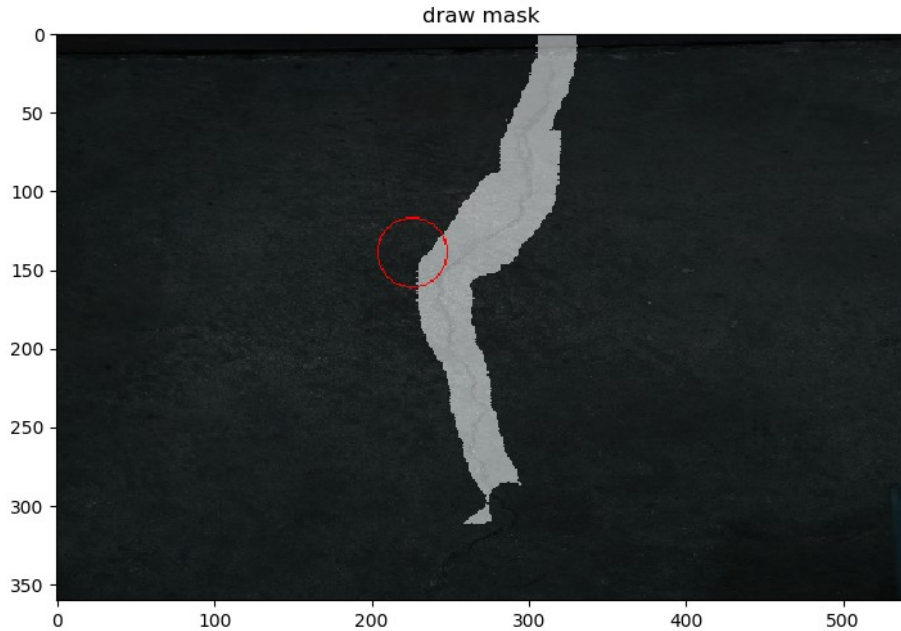


# crack segmentation tool



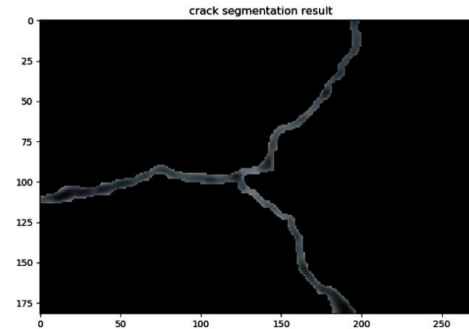
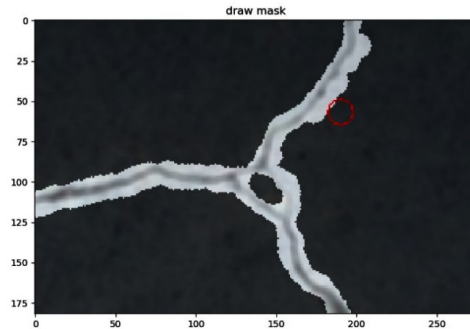
# feature

- paint brush
  - paint on crack area
  - clean the painted mask area
  - adjust paint radius
- Segmentation
  - opencv Grabcut
  - Canny edge

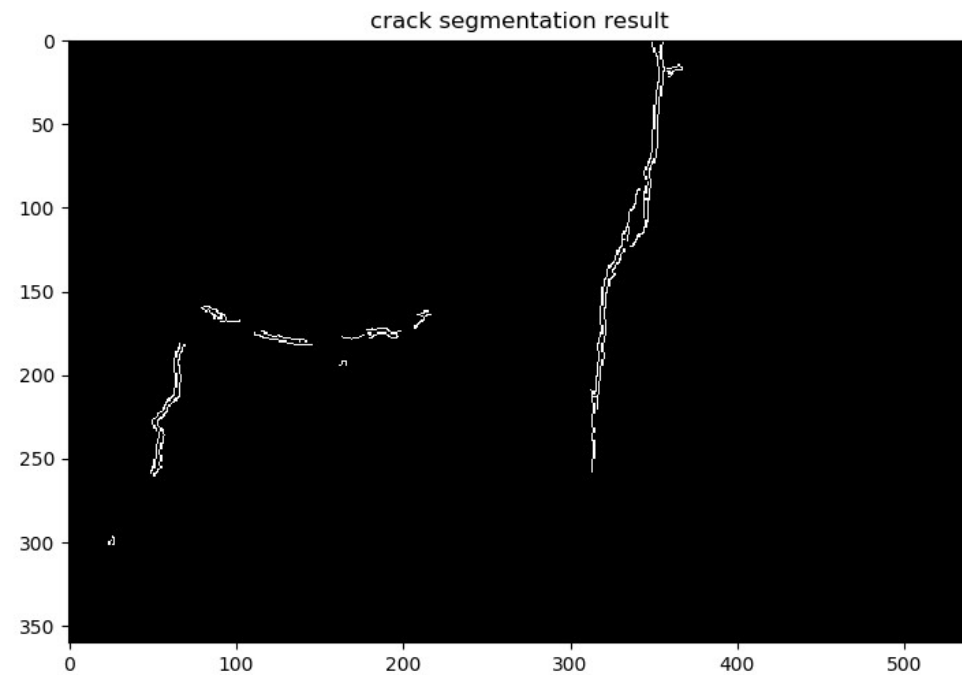
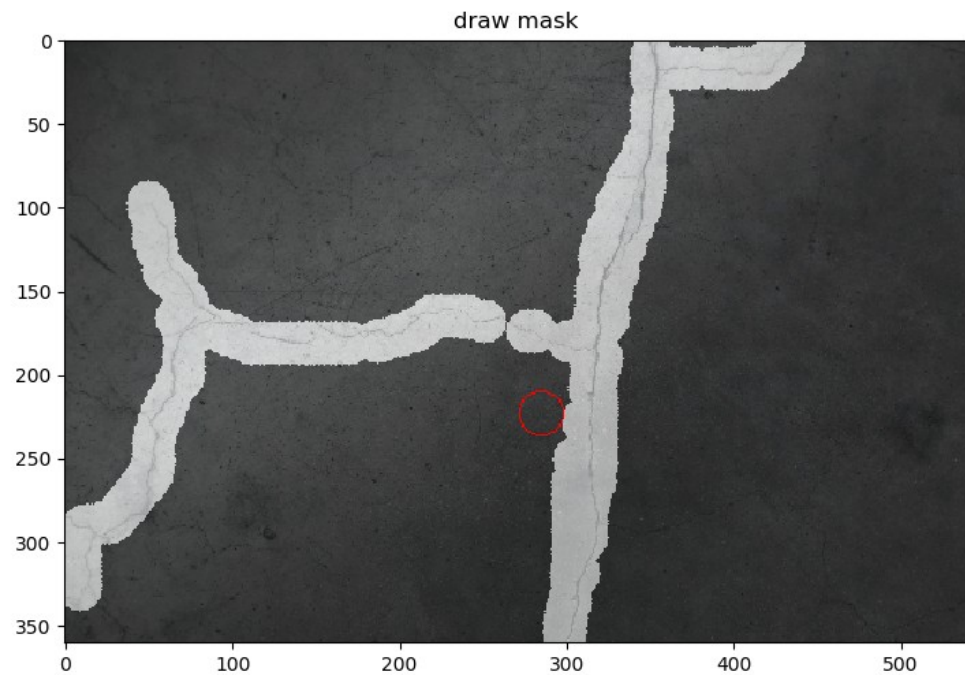


# grab-cut

- Just works when the surrounding area is different from crack area
- Fail when crack is small and looks similar to the background (pavement)



# Canny edge



# Canny edge

- Threshold calculation
  - Median of all gray pixels in the painted area
  - Lower: median  $- 0.3$
  - Upper: median  $+ 0.3$
- Problems
  - Lot of noise
  - Missing crack lines



# Next step

- segmentation
  - Cut the painted area into smaller segments?
    - Calculate canny edge threshold per segment
  - Tried different adaptive threshold method?
  - Other idea?

