Understanding Image Segmentation

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https://rcc-visualization.slack.com/signup

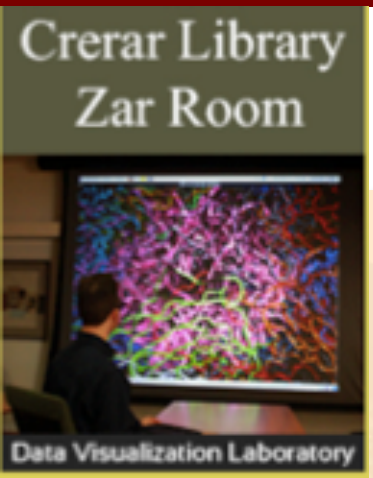
RCC: Who we are

- The Research Computing Center (RCC) is a unit under the Office of the Executive Vice President for Research, Innovation and National Laboratories

- RCC is dedicated to providing the University of Chicago community a full-service high-performance computing (HPC) center
  - Managing university's largest supercomputer called Midway

- A team of computational scientists, application developers, and research programmers assist you to effectively utilize our computational resources

RCC: Where we are



Located at:

5607 S Drexel Avenue

Zar Data Visualization Lab

Walk-in

Consultants @

Regenstein room 216

Contact us:

email: help@rcc.uchicago.edu
Web: rcc.uchicago.edu
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Data Center @ 6045 Kenwood

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Image Segmentation

- **Segmentation**
  - **purpose: partition an image into *meaningful* regions with respect with a particular application**

- **the most effective segmentation algorithms: combinations of image processing techniques**

Common Segmentation Tools

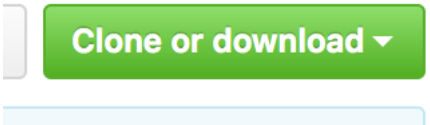
- **Skimage** (Python)
  - Image processing library
- **OpenCV** (Python, C, C++)
- **SimpleITK** (Python)
- **Fiji** (Java)
- **Matlab**
- **Others (ITK-Snap, 3D Slicer)**

Download the notebooks

- **(on Midway) use your home directory**

- `$ git init`
- `$ git clone https://github.com/DoraSzasz/workshop_image_segmentation.git`

Manual download:

- https://github.com/DoraSzasz/workshop_image_segmentation
- Click on 

Launching Jupyter Notebook

- **Midway users**:
  https://jupyter.rcc.uchicago.edu/hub/login

- **Try Jupyter online**:
  https://try.jupyter.org/

- **Installing Ipython (homework)**:
  https://ipython.org/install.html