Scikits.Image

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SciPy 2010 Lightning Blitz
Overview

The scikits.image toolkit includes image processing algorithms for use with Python and NumPy.

- SciPy’s ndimage provides low-level manipulation, scikits.image centres around algorithms and applications (getting your research done).
- Python Imaging Library is not geared for scientific computing; development model makes it hard to contribute. Scikits.image community aims to be inclusive and open.
- Initial commit: August 22, 2009
- Current contents include
  - Color space manipulation
  - Filtering
  - Graph
  - IO (plugin framework – imread, imwrite, imshow – qt, gtk, matplotlib, freeimage, PIL)
  - Morphology
  - OpenCV
  - Transformations
OpenCV wrappers

- OpenCV is a high performance, comprehensive, C++ computer vision library originally written by Intel; now maintained by Willow Garage.
- Several Python wrappers for OpenCV exist. However, ours are unique:
  - Our image data structure is a NumPy array
  - No memcopies between NumPy arrays and OpenCV = Fast
  - Written in Cython
  - We wrap the majority of the image processing routines (NumPy is better at everything else).
Join us for the sprint!

- Incorporate routines donated by MIT’s **Broad Institute**.
- Add Nicolas Pinto’s **SIFT features**.
- **Easier building of docs** (building the docs outside the code directory, without destroying compiled extensions).
- **Improve execution speed of unit tests** (many of the tests operate on unnecessarily large images). Consider replacing the current filter routines, or at least augment with kernel based filters.
- Write an image processing **tutorial** (see, for example, [http://pythonvision.org/](http://pythonvision.org/)).
- Incorporate **Gitwash** with docs build process (currently a once-off build is included at [http://stefanv.github.com/scikits.image/gitwash/index.html](http://stefanv.github.com/scikits.image/gitwash/index.html)).
http://scikits.appspot.com/image

SciKits

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scikits.image
version 0.2.2

Image processing routines for SciPy

Download: http://github.com/stefanv/scikits.image
Homepage: http://stefanv.github.com/scikits.image
PyPI: http://pypi.python.org/pypi/scikits.image
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