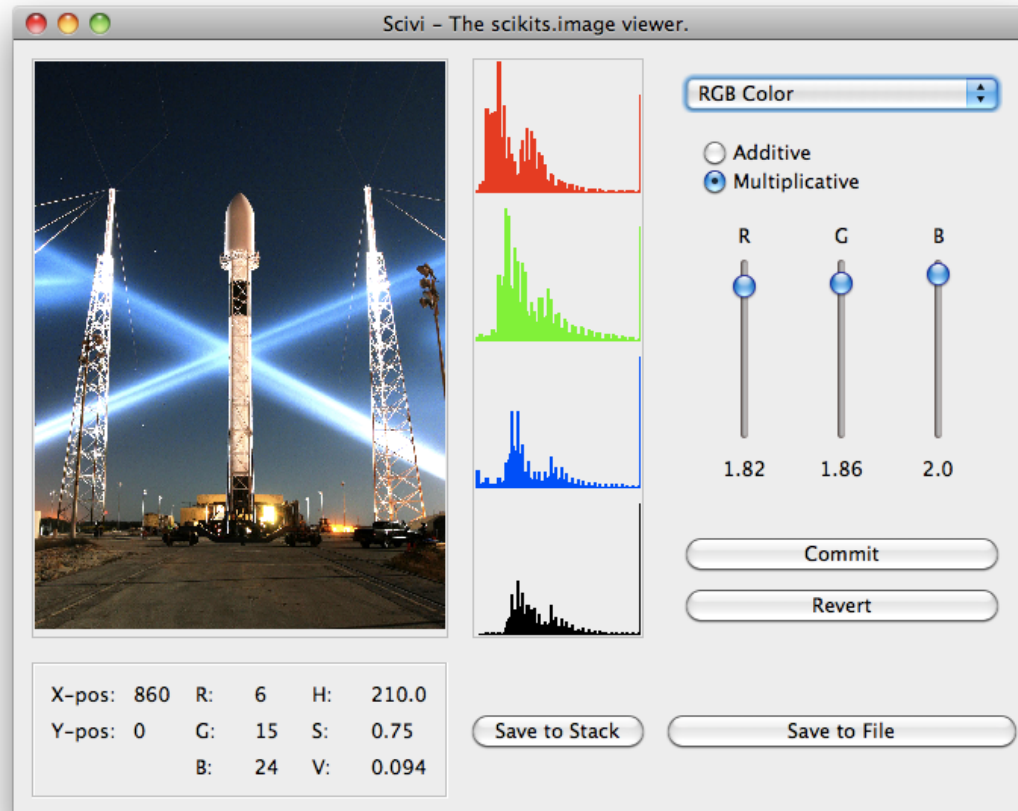


Scikits.Image

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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/>).
- Incorporate **Gitwash** with docs build process (currently a once-off build is included at <http://stefanv.github.com/scikits.image/gitwash/index.html>).

`http://scikits.appspot.com/image`



The screenshot shows a web browser window with the address bar containing `http://scikits.appspot.com/image`. The browser's toolbar includes navigation buttons (back, forward, refresh, home, star) and several extensions: Subsonic, Import to Mendeley, Bookmark on Delicious, LSQR: Sparse Equatio, and Readability. The main content area features the SciKits logo (a blue circle with a white 'S' and a plus sign) and the text "SciKits" in orange. Below the logo is a navigation menu with links: Home | About SciKits | Download a SciKit | Contribute. The main heading is "scikits.image" in blue, followed by "version 0.2.2" in italics. The description reads "Image processing routines for SciPy". Below this are four links: "Download: <http://github.com/stefanv/scikits.image>", "Homepage: <http://stefanv.github.com/scikits.image>", "PyPI: <http://pypi.python.org/pypi/scikits.image>", and "People: Stefan van der Walt".