

**NAME**

autopano-sift – Automatic panorama stitching package

**INTRODUCTION**

The autopano-sift package contains a number programs to ease the creation of panoramic images. A tedious task in panoramic image creation from many individual images is the aligning of the images so they fit together. This is normally done by using control points which give information about shared image features. For example, image two images of a church. Lets assume both images overlap so that the rooftop of the church is visible in both. By telling a panorama software that the roof is in both images at a specific position the images can be aligned. At least three control point pairs between every two images are required usually.

The manual work of creating this control points can be immense. Especially for panorama images holding more than one line of images there is a huge number of possible overlaps.

The autopano-sift package can automatically create control point pairs by using a combination of sophisticated algorithms and models. For most feature-rich images it works very well, often outperforming humans in coverage, precision and speed.

In the following, the individual utilities are introduced. If you want a quick start, try the **autopanog(1)** GUI frontend.

**DESCRIPTION**

**autopanog** The GTK# GUI frontend for generating and matching SIFT keypoints. As a user wanting to stitch panorama images, this is all you will ever need. See **autopanog(1)**

**autopano** The keypoint matching program. It can take SIFT keypoint files as input and produce PTO output files. See **autopano(1)**

**generatekeys** The SIFT keypoint extraction program. Takes an image from you, and gives keypoints back. Optionally can downscale the image to a given resolution, so your memory size is cared for. See **generatekeys(1)**

**showone** Show the SIFT keypoints overlayed over the source image. Use includes debugging and tuning of SIFT parameters and to get an impression how well spread the keypoints are. See **showone(1)**

**showtwo** Do simplistic matching of SIFT keypoints between two images, without geometric model. Use includes representing general matching quality. Optionally filter only a given number of "best" keypoint matches. See **showtwo(1)**

**BUGS**

If you find any bugs in the programs, please mail the author.

**AUTHOR**

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**SEE ALSO**

**autopano(1)**, **autopanog(1)**, **generatekeys(1)**, **showone(1)**, **showtwo(1)**