Computer Vision - Lab 1

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(a)

Using the given command sift finds 1023 key points in the image scene.pgm. The command 'whos' gives the following output:

```
>> whos
  Name          Size                Bytes  Class     Attributes

  I           384x512              196608  uint8
  keys       1021x128             1045504  double
  loc        1021x4                 32672  double
```

As we can observe, the dimensions of the array 'keys' are 1021x128, so every key is represented by 128 values. The number of keys is in the order mentioned in the paper (order of 1000), although in the paper it states that this is expected for an image of 512x512. Our image is 384x512 so we expected a number in about the same order. The second dimension, the size of the key vector, is smaller here (128) than in the paper (160). This is because in the paper they also examine the image at the second level of the pyramid, one octave higher. This gives them $2x2x8 = 32$ extra samples in their key vector.

Appendix A Code

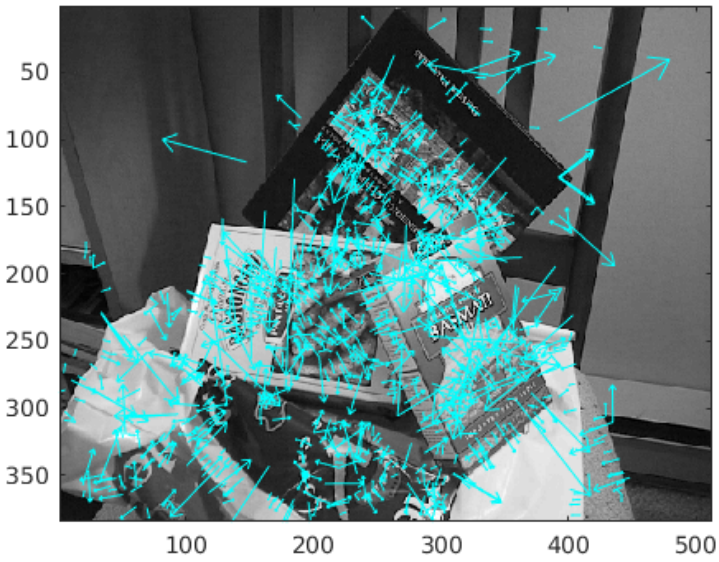

Figure 1: Found keypoints in ‘scene.pgm’ using SIFT.