How to implement SIFT algorithm

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September 28
steps

- Find SIFT keypoints
- Match keys
How to Find SIFT keypoints

- Compare each pixel to:
  - 8 neighbors in current image
  - 9 neighbors in scale above
  - 9 neighbors in scale below
- Take pixel if larger or smaller than all of them
Keypoint Localization

- Reject points with low contrast and localized along an edge
- Use Quadratic Taylor Expansion of the scale-space function to reject keypoints which have lower contrast
- Use Difference Of Gaussians function to reject near-edge keypoints
Match keys from two images

- Import two images
- Create a new image that join two images vertically
- Match the keys in lists keys1 to their best matches in keys2
- draw a line on the image from keys1 to match