**Assignment 4**

1. Technical Overview
2. SIFT feature matching

The Scale-Invariant Feature Transform(SIFT) is an excellent feature extracting methodology that gives consideration to both performance and computation efficiency. To summarize, it generally extracts features based on the below 4 steps.

1) It uses the idea of Laplacian of Gaussian filter, and applies LoG of different onto the original image, which forms an octave, to smooth out clutters for scale invariance. The difference of adjacent images in the octave is saved into Difference of Gaussian(DoG). And the process is looped over by further sampling less pixels into a smaller octave and DoG, so finally we would get a downsampling pyramid.

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