

Abstract

Stereo Vision is the fourth year computer apprentice project work accomplished as per the requirement of the Bachelor of Engineering (Computer Engineering) course of Kathmandu University. This is a year long research project carried out at the Software Development Room of Department of Computer Science & Engineering in Kathmandu University.

The report on the project work covers some of the theories and principles of Stereo Vision as stated by different researchers including a practical implementation of one of such principle. The implementation of a cooperative algorithm for stereo matching and occlusion detection has been done in java platform with a GUI support for the user to view results graphically.

The basic idea of stereo matching is to take a pair of 2D image and match the similarity between the two and estimate the third dimension (i.e. the depth of a particular object in an image). Some of the practical uses of this algorithm along with the limitations and issues has also been discussed.

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