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Target distance estimation using monocular vision system for mobile robot

Abstract

Mobile robot with vision could be useful for many applications and purposes. However, the vision system needs to be robust, effective, robust and fast to achieve on its goal. Somehow it needs stereo vision system to estimate the depth of the object. In this paper, a monocular vision system is introduced to the mobile robot to enhance their capabilities for calculating the distance or depth approximately. The main topic explains method used in monocular vision system, which is Hough transforms and how this method operates. This paper also shows the basic mathematical morphology which is implemented in Hough transform for image processing.

Keywords — Hough transform, image processing, mathematical morphology, mobile robot, monocular vision system