

Abstract:

In this work, we propose a depth estimation system based on image sequence and odometry information. The key idea is that depth estimation is decoupled from pose estimation. Such approach results in multipurpose system applicable on different robot platforms and for different depth estimation related problems. Our implementation uses various filtration techniques, operates real-time and provides appropriate results. Although the system was aimed at and tested on drone platform, it can be well used on any other type of autonomous vehicle that provides odometry information and video output.