**Abstract**

The development of digital image processing is closely tied to the development of the digital computers. Because of its nature, digital image requires lot of storage space and their processing needs so much computational power that progress in the field of digital image processing had been highly dependent on the development of modern digital computer which came only in 1940s. This paper is a complete review of various image processing techniques and large number of related application in diverse disciplines, including medical, biometrics, moving object tracking, vehicle detection & monitoring, document analysis and retrieval, outdoor surveillance, remote sensing and Traffic queue detection algorithm for processing various real time image processing challenges. Techniques discussed segmentation, edge detection and corner detection also application areas and their future scope are explained. The intension of this paper is useful to researchers and practitioners interested in real time image processing.