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## Abstract

Osteoarthritis (OA) is commonly seen among older people and it is arthritic type disease. It is a degenerative joint disease where cartilage slowly degenerates. Cartilage that shelters the bone ensures the smooth crusade of the joints. In knee OA, exaggerated bones come into contact due to degradation of cartilage, causing swell, discomfort and defeat of motion. Due to stress, knee joints can be frequently incapacitated and broken. The early detection of KOA could alert people to slow down the progression of the illness. Encouraged by this, the paper presents an

automatic method to diagnose the Osteoarthritis disease. The cartilage of knee joint is segmented with pixel based segmentation method. For segmentation the texture filter method is applied. From segmented image cartilage area is calculated and depending on its estimated value image is classified into normal and OA affected. Osteoarthritis (OA) is commonly seen among older people and it is arthritic type disease. It is a degenerative joint disease where cartilage slowly degenerates. Cartilage that shelters the bone ensures the smooth crusade of the joints. In knee OA, exaggerated bones come into contact due to degradation of cartilage, causing swell, discomfort and defeat of motion. Due to stress, knee joints can be frequently incapacitated and broken. The early detection of KOA could alert people to slow down the progression of the illness. Encouraged by this, the paper presents an automatic method to diagnose the Osteoarthritis disease. The cartilage of knee joint is segmented with pixel based segmentation method. For segmentation the texture filter method is applied. From segmented image cartilage area is calculated and depending on its estimated value image is classified into normal and OA affected.

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### Index Terms

Computer Science

Image Processing

**Keywords**

Cartilage Magnetic Resonance Imaging (mri) Osteoarthritis (oa).