Abstract

This paper proposes 3 dimensional image reconstruction captured of different objects angled differently. Raspberry Pi camera is used to capture the images. The main objective of this paper lies in using the two dimensional images in the form of cross sectional slides also known as multi slice-to-volume registration that are placed one above the other in a mesh to re-project it back to a three dimensional model. Iterative reconstruction algorithm is applied as it is insensitive to noise and even in case of incomplete data or image it helps in reconstructing the image in the most favorable manner. Finally, the experiments are compared with the other methods or algorithms such as Speeded up robust feature (SURF) and Sum of squared differences (SSD) methods which are far more complex with nominal clarity.

References


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Index Terms

Computer Science

Image Processing

Keywords

Raspberry Pi; features; camera; 2d images; cross sectional; slice-to-volume registration; Iterative reconstruction.