

## Abstract

The project is aimed at automating the process for assembling of the torn pieces from their images to reconstruct the whole document. The whole project is aimed at reducing the amount of effort required to assemble pieces and at the same time increasing the efficiency of the whole process. The essence of the project is to match the edges using the edge variations and the matching cost between the edges. Humans are liable to commit mistakes but computers don't. So that is why we let the system perform the task by simply putting the images to the system and executing it automatically. These types of software are already available in the market such as Andrea Mosaic for PC application and MacoSaix for the MAC application. The problem with these software is that in there is a lot of involvement of humans in the form of choosing the images to be matched. So, thus we are not saving the human resources. The aim of this work is to reduce the human involvement while increasing the efficiency of the application.

We describe a procedure for reconstructing documents that have been shredded by hand, a problem that often arises in forensics. The proposed method first calculates the boundary values of the torn pieces and the matching cost between the edges is used for reconstruction. The pieces are merged together as we search for a global solution. We demonstrated through comprehensive experiments that this feature-matching-based procedure produces interesting results for the problem of document reconstruction.