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Abstract

Data clustering refers to the method of grouping data into different groups depending on their characteristics. This grouping brings an order in the data and hence further processing on this data is made easier. This paper explains the clustering process using the simplest of clustering algorithms - the K-Means. The novelty of the paper comes from the fact that it shows a way to perform clustering in Microsoft Excel 2007 without using macros, through the innovative use of what-if analysis. The paper also shows that, image processing operations can be done in excel and all operations except displaying an image do not require a macro. The paper gives a solution to the problem of reading an image in excel by introducing a user defined add-in. The paper also has explained and implemented image segmentation as an application of clustering. This paper aims at showing that Microsoft Excel is a great tool as far as technical learning is concerned for the fact that, it can implement almost all algorithms and processes, and is very

successful in providing the first hand exposure to an novice student.

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Index Terms

Computer Science

Machine Learning

Key words

Data clustering
Excel add-in to read image

K-Means

Image Segmentation

Microsoft Excel

