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| Title | A Lossless Image Compression Technique using Location Based Approach | | |
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| Abstract |  |
| In modern communicative and networked computing, sharing and storing image data efficiently have been a great challenge. People all over the world are sharing, transmitting and storing millions of images every moment. Although, there have been significant development in storage device capacity enhancement sector, production of digital images is being increased too in that proportion. Consequently, the demand of handsome image compression algorithms is yet very high. Easy and less-time-consuming transmission of high quality digital images requires the compression-decompression (CODEC) technique to be as simple as possible and to be completely lossless. Keeping this demand into mind, researchers around the world are trying to innovate such a compression mechanism that can easily reach the goal specified. After a careful exploration of the existing lossless image compression methods, we present a computationally simple lossless image compression algorithm where the problem is viewed from a different angle- as the frequency distribution of a specific gray level over a predefined image block is locatable, omission of the most frequent pixel from the block helps achieve better compression in most of the cases. Introducing the proposed algorithm step by step, a detailed worked out example is illustrated. The performance of the proposed algorithm is then measured against some standard image compression parameters and comparative performances have been considered thereafter. It has been shown that our approach can achieve about 4.87% better compression ratio as compared to the existing lossless image compression schemes. | |