** GEETHANJALI COLLEGE OF ENGINEERING AND TECHNOLOGY (Autonomous)**

**Cheeryal (V), Keesara (M), Medchal Dist., Telangana - 501 301**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

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**MINI PROJECT ABSTRACT**

**IV B.Tech. I SEM CSE - C Section**

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| **BATCH NUMBER: C12** | **Mini Project** | **Academic Year:**  **2023-2024** |

**PROJECT TITLE:**

**TEAM MEMBERS:**

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***Signature of the Signature of the Signature of theProject In-charge Guide with Date Project Coordinator***

**ABSTRACT**

Medical imaging techniques produce large volumes of image data,posing significant storage and transmission challenges.This project is aimed to develop an efficient medical image compression system using the LZW(Lempel-Ziv-Welch) algorithm.

The LZW algorithm is a very common compression technique.It is lossless,meaning no data is lost when compressing.The main aim of using the LZW algorithm is to optimize image quality and compression ratios.This allows to reduce the image file size,making it easier to store and transmit.This is useful for telemedicine applications,enabling faster image sharing and diagnosis.

LZW looks for repeated patterns in an image,like a row of identical pixels. It reads a sequence of symbols,grouping the symbols into strings,and converting the strings into codes.When it finds a repeated pattern,it replaces it with a short code.The code is stored instead of the original code and the LZW continues finding and replacing patterns until the entire image is compressed.

Compression of medical data before storage is very important to save storage space.The Stored data can be accessed online with very less bandwidth.The proposed method would be very useful in developing telemedicine applications.LZW compression used in the proposed method can be used in compressing the medical data better than run length coding and huffmann coding.

**Objective:**

Efficient compression of huge number of medical images becomes necessary for storing and transferring in telemedical applications.The proposed algorithm aims to achieve high compression ratios while mainatining quality of images.Medical images from different imaging modalities such as magnetic resonance imaging(MRI),computed tomography(CT) images are used in testing.The reconstructed image proposed is much better in size and quality.

**Commercializable: Yes/No:** No

**REFERENCES:**

**Date of Submission:** 27-04-2024

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