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FINAL YEAR PROJECT REPORT

IDENTIFICATION OF HERNIATED DISC IN LUMBO-SACRAL REGION USING MRI SCANS

In fulfillment of the requirement for degree of
Bachelors in Computer Engineering (BCE)

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Identification Of Herniated Disc In Lumbo-Sacral Region Using Mri Scans

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This report is submitted as required for the Project in accordance with the rules laid down by the Bahria University as part of the requirements for the award of the degree of Bachelor of Engineering. I declare that the work presented in this report is my own except where due reference or acknowledgement is given to the work of others.

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Abstract

For the past few years many doctors and scientists are working on the project related to radiology and medical. This project proposes the solution mainly for the radiologist that helps them to examine thousands of MRI in no time as the herniated disc problem is rapidly increasing due to which the workload on the radiologist also increases. Keeping in mind this situation we have proposed the solution which can automatically generate the result of the MRI of the backbone using the machine learning, transfer learning models as well as image processing tools. This system can predict after seeing the MRI of the patient that whether the patient has Herniated disc problem or not. It is also effective for the patients as it gives accuracy by comparing the normal person MRI with Herniated Disc MRI scan. The implementation is based on the Machine Learning (Convolution Neural Network), image preprocessing and binary classification.

Keywords: MRI, Machine Learning, Image preprocessing, Herniated Disc

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