

Student Project Winner from PSUT

A high-Performance system for medical Image diagnosis

Project Background

Medical imaging has been a critical area of research for decades. With the advent of deep learning and computer vision, it is now possible to develop algorithms that can help diagnose medical conditions using medical images such as X-rays, CT scans, and MRI scans. In this context, our project focuses on developing a Convolutional Neural Network (CNN) that can classify whether a bone is fractured or not based on an input X-ray image.

Project Features

- The project features an easy-to-use user interface (UI) that allows doctors/nurses to upload an X-ray image and get a fracture classification result.
- The CNN model used in the project was trained on a dataset of X-ray images with labeled fractures, and the model achieved an 80% accuracy on the validation data.

Project Introduction

- The project is designed to help medical professionals diagnose bone fractures quickly and accurately.
- The project saves time and effort in the diagnosis process and provides a reliable, consistent diagnosis.

Innovations

The primary innovation of our project is the use of a CNN model for fracture classification. This is a significant improvement over traditional methods, which may rely on human interpretation of X-ray images, which can be subjective and inconsistent. Additionally, the UI of the project provides an easy-to-use platform for medical professionals to upload and process X-ray images quickly.

Achievements

- Developing a CNN model with an 80% accuracy on validation data, which is an impressive level of accuracy for medical image classification.
- Developing a user-friendly UI that allows medical professionals to upload and process X-ray images quickly and easily.
- Creating a platform that has the potential to save time and effort in the diagnosis process and provide consistent, reliable results.