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Detection of Gastrointestinal Lesions using Deep Learning

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Abstract: *In the context of gastrointestinal health, this paper focuses on the identification of lesions and six stages of it using deep learning techniques. Gastrointestinal lesions can be challenging to diagnose accurately, often leading to delayed treatment and potential health complications. Like challenges in medical diagnosis, where early detection is crucial, this paper aims to provide a robust solution for early lesion identification. We leverage advanced algorithms such as modified ResNet34 a Convolutional Neural Network architecture and Pytorch, for effective filtering processes. The proposed predictive analytics framework incorporates machine learning techniques to minimize error rates. Our model processes gastrointestinal image data, facilitating accurate lesion identification. Through extensive experimentation, our model demonstrates promising results in early lesion detection, facilitating timely clinical intervention and improved patient outcomes. The utilization of Visual Studio Code enhances our development process, ensuring a seamless implementation of our deep learning methodology. Overall, our project aims to enhance diagnostic accuracy, paving the way for improved clinical monitoring and ultimately contributing to a healthier and more secure lifestyle for individuals with gastrointestinal concerns.*

Keywords: Gastrointestinal Lesions, modified ResNet34, Pytorch and CNN

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