Patent Search

Invention Title	A Deep Learning Framework for CT-Based Abnormality Detection and Organ-Level Segmentation
Publication Number	12/2026
Publication Date	20/03/2026
Publication Type	INA
Application Number	202641028196
Application Filing Date	10/03/2026
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	COMPUTER SCIENCE
Classification (IPC)	G06T 7/00, G06T 7/11, G06N 3/04, G06N 3/08, A61B 6/03

Inventor

Name	Address	Country	Nat
Shaik Rafi, SRM University AP	Assistant Professor, Department of CSE , SRM University AP, Amaravati-522240, Guntur Dist., Andhra Pradesh, India.	India	Indi
Swathi Buragadda, Lakireddy Balireddy College of Engineering	Sr. Assistant Professor Department of Computer Science and Engineering, Lakireddy Balireddy College of Engineering, Mylavaram, NTR District, A.P-521230, India	India	Indi
Siddabattula Geetha Sri Priyanka, Potti Sri Ramulu Chalavadi Mallikarjuna Rao College of Engineering	Assistant Professor Department of Computer Science and Engineering, Potti Sri Ramulu Chalavadi Mallikarjuna Rao College of Engineering, Kothapeta, Vijayawada, NTR District, A.P-520001, India	India	Indi
Parameshwari M Goud, Vardhaman College of Engineering	Assistant Professor, Department of Mathematics, Vardhaman College of Engineering, Kacharam, Shamshabad-501218, Hyderabad, Telangana, India.	India	Indi
Chinnaswamy C N, The National Institute of Engineering	Associate Professor, Dept. of ISE The National Institute of Engineering, Mysuru, VTU Belagavi, Karnataka, India	India	Indi

Applicant

Name	Address	Country	Nat
Shaik Rafi, SRM University AP	Assistant Professor, Department of CSE , SRM University AP, Amaravati-522240, Guntur Dist., Andhra Pradesh, India.	India	Indi
Swathi Buragadda, Lakireddy Balireddy College of Engineering	Sr. Assistant Professor Department of Computer Science and Engineering, Lakireddy Balireddy College of Engineering, Mylavaram, NTR District, A.P-521230, India	India	Indi
Siddabattula Geetha Sri Priyanka, Potti Sri Ramulu Chalavadi Mallikarjuna Rao College of Engineering	Assistant Professor Department of Computer Science and Engineering, Potti Sri Ramulu Chalavadi Mallikarjuna Rao College of Engineering, Kothapeta, Vijayawada, NTR District, A.P-520001, India	India	Indi
Parameshwari M Goud, Vardhaman College of Engineering	Assistant Professor, Department of Mathematics, Vardhaman College of Engineering, Kacharam, Shamshabad-501218, Hyderabad, Telangana, India.	India	Indi
Chinnaswamy C N, The National Institute of Engineering	Associate Professor, Dept. of ISE The National Institute of Engineering, Mysuru, VTU Belagavi, Karnataka, India	India	Indi

Abstract:

The present invention relates to a deep learning framework for automated abnormality detection and organ-level segmentation from CT images. The framework integrate advanced deep learning architectures with medical image processing techniques to analyze CT scans efficiently. The proposed system performs preprocessing of CT image feature extraction, abnormality detection, and organ segmentation using deep neural networks. The framework improves diagnostic accuracy by simultaneously detecting abnormal regions and identifying anatomical structures. The system reduces the burden on radiologists by enabling automated medical image analysis. The invention can used in healthcare systems and computer-aided diagnosis platforms for efficient CT image interpretation.

Complete Specification

Description:The present invention relates to a deep learning framework for automated abnormality detection and organ-level segmentation from CT images. The framev integrates advanced deep learning architectures with medical image processing techniques to analyze CT scans efficiently. The proposed system performs preprocessing images, feature extraction, abnormality detection, and organ segmentation using deep neural networks. The framework improves diagnostic accuracy by simultaneously detecting abnormal regions and identifying anatomical structures. The system reduces the burden on radiologists by enabling automated medical image analysis. The invention can be used in healthcare systems and computer-aided diagnosis platforms for efficient CT image interpretation. , C , C , Claims:1. A deep learning framewo CT-based abnormality detection and organ-level segmentation comprising preprocessing of CT images, feature extraction using deep neural networks, abnormality dete and segmentation of anatomical organs.

2. The framework as claimed in claim 1, wherein the preprocessing stage includes noise removal, image normalization, and contrast enhancement for improving CT im quality.

3. The framework as claimed in claim 1, wherein the feature extraction stage utilizes convolutional neural network architectures to identify spatial and structural featur from CT images.

4. The framework as claimed in claim 1, wherein abnormality detection is performed by analyzing extracted features to identify suspicious regions in CT images.

5. The framework as claimed in claim 1, wherein the segmentation module performs organ-level segmentation to delineate anatomical structures and assist in accurat localization of detected abnormalities.

View Application Status