Patent Search

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Inventor

Name	Address	Country
Dr.Farhad Mehta	Assistant Professor C, School of Pharmaceutical Sciences, U.T.D, RGPV University, Bhopal, Madhya Pradesh, India. Pin Code:462038	India
Mrs.Pannangi Rajyalakshmi	Assistant Professor, Department of CSE, TKR College of Engineering and Technology, Hyderabad, Rangareddy, Telangana, India. Pin Code:500097	India
Mr.Kumbam Venkat Reddy	Assistant Professor, Department of Information Technology, Vignana Bharathi Institute of Technology, Hyderabad, Medchal, Telangana, India. Pin Code:501301	India
Dr.Chidurala Nithin	MBBS Intern, Rama Medical College Hospital & Research Centre, Pilkhuwa, Hapur, Uttar Pradesh, India. Pin Code:245304	India
Mr.Addagatla Prashanth	Assistant Professor, Department of ECE, Institute of Aeronautical Engineering, Dundigal, Hyderabad, Telangana, India. Pin Code:500043	India
Dr.M.Kalpana Chowdary	Associate Professor, Department of CSE, MLR Institute of Technology, Dundigal, Hyderabad, Telangana, India. Pin Code:500043	India
Dr.Chinnala Balakrishna	Associate Professor, Department of Computer Science and Engineering, Guru Nanak Institute of Technology (Autonomous), Hyderabad, Telangana, India. Pin Code:501506	India
Mrs.Sandhya Vallabhareddi	Associate Professor, Department of ECE, BVC Engineering College (Autonomus), Odalarevu, Dr.B.R.Ambedkar Konaseema District, Andhra Pradesh, India. Pin Code: 533102	India
Ms.K.Lakshmi Priyanka	Assistant Professor, Department of ECE, BVC Engineering College (Autonomus), Odalarevu, Dr.B.R.Ambedkar Konaseema District, Andhra Pradesh, India. Pin Code: 533102	India
Mr.G.Kasi Reddy	Assistant Professor, Department of Computer Science and Engineering, Guru Nanak Institute of Technology (Autonomous), Hyderabad, Telangana, India. Pin Code:501506	India

Applicant

Name	Address	Country
Dr.Farhad Mehta	Assistant Professor C, School of Pharmaceutical Sciences, U.T.D, RGPV University, Bhopal, Madhya Pradesh, India. Pin Code:462038	India
Mrs.Pannangi Rajyalakshmi	Assistant Professor, Department of CSE, TKR College of Engineering and Technology, Hyderabad, Rangareddy, Telangana, India. Pin Code:500097	India
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Mr.G.Kasi Reddy	Assistant Professor, Department of Computer Science and Engineering, Guru Nanak Institute of Technology (Autonomous), Hyderabad, Telangana, India. Pin Code:501506	India

Abstract:

The present invention presents a new approach for the automated detection and classification of anatomical structures in biomedical images, utilizing image process techniques. By combining image segmentation, feature extraction, and classification algorithms, this method can be employed across a wide range of imaging modal including X-rays, CT scans, MRI images, and ultrasound images. This invention address the challenges associated with manual interpretation by providing a method th accurately detect and classify a variety of anatomical structures, such as bones, organs, blood vessels, and tumors. The application of this novel invention has signific to advance the field of medical imaging, allowing for improved accuracy, efficiency, and consistency in medical image analysis, leading to better patient outcomes. Thi has applications in clinical settings, including diagnosis, treatment planning, and disease progression monitoring, as well as in research settings for identifying novel b disease from large datasets of biomedical images. Accompanied Drawing [FIG. 3]

Complete Specification

Description:[001] The present invention relates to the field of the biomedical imaging. The invention more particularly relates to a novel method for detecting and classifying anatomical structures in biomedical images using advanced image processing techniques.

BACKGROUND OF THE INVENTION

[002] The following description provides the information that may be useful in understanding the present invention. It is not an admission that any of the informati provided herein is prior art or relevant to the presently claimed invention, or that any publication specifically or implicitly referenced is prior art.

[003] Medical imaging is a critical tool in modern medicine, enabling the diagnosis and treatment of a wide range of diseases and conditions. Biomedical images, inc X-rays, CT scans, MRI images, and ultrasound images, provide clinicians with detailed information about the internal structures and functions of the body.

[004] Interpreting biomedical images can be a challenging task, particularly when the images contain complex anatomical structures. Traditionally, radiologists and medical professionals have relied on their own expertise and visual interpretation to analyze medical images. However, this approach can be time-consuming, subje and error-prone, particularly when dealing with large volumes of data.

[005] To address these challenges, there is a growing interest in developing automated methods for analyzing and interpreting biomedical images. Automated meth have the potential to improve the accuracy, efficiency, and consistency of medical image analysis, thereby improving patient outcomes and reducing healthcare cost

[006] Automated methods for analyzing biomedical images rely on a combination of image processing and machine learning algorithms. Image processing algorithi used to preprocess and segment the images to identify regions of interest. Feature extraction algorithms are used to compute a set of quantitative measures or des that capture the properties of the image regions. Classification algorithms are used to assign a label or class to the image regions based on their features

View Application Status