



A Paper On Ocular Disease Recognition Using Convolutional Neural Network

Vikas Jadhao, Vaishali Chavhan, Sandip Katpelwar, Prof. D. B. Pohare

Dept. of E&TC Engineering, JCEOT, Yavtamal, Maharashtra

ABSTRACT:

Image fusion is an efficient and easy image processing method for which detecting different types of tumours. In this paper we are about to do image analysis system for the eye tumour detection will be designed. In this system, different image processing methods are used to extracted the tumour and then mark it on the original image. The images are firstly smoothed using the median filtering. The background of the image is been subtracted so that to be then added to the original, resulting in a brighter area of interest or tumour area. The proposed Researches consists of two Phases like, Eye Tumour Detection System and Intelligent Eye Tumour Detection System. Tumours in the eye and close-by tissue (all in all known as of like circles) can be favourable (non-harmful) tumours, for example, dermoid sores however they can like-wise be threatening tumours like rhabdomyosarcoma and Retinoblastomas, Melanocytic stromal expansions and also the nevi of the iris is the most widely recognized tumours of the iris, yet melanoma is rare³. Clinical separation between the iris nevus may at times be troublesome and now and again may be unimaginable. Melanomas of all the iris to generally little Discrete Injuries, despite the fact that they might infrequently be diffuse, infiltrative, or different and may be bringing about the heterochromia, interminable uveitis, or spontaneous discharge into the foremost council of the eye hyphema, Iris melanomas that were includes more than 69% of the point periphery are connected with auxiliary glaucoma

Keywords: Artificial neural networks: image fusion: eyes Tumour Detection: cany Operators.

Introduction:

As stated in WHO's report in early 2000s, fatal injuries by cancer is 6.2 Million of

Worldwide. However, people could be survived If their disease could be detected at early stages. Iridology is a medicine technique that examines patterns, colours, and other characteristics of the iris, so that the patient's health can be examined. Analysing The strangest changes in the cells, iris could provide adequate hints and information, where iridologists could diagnose the tumour.

Image processing techniques are widely used frequently in various medical fields like, Image compression is biggest common application are used in the field of medical image processing. This application is very much Important in this medical field as well because the reduction in file size allow more images to be stored in a given amount of Disk or Memory

Space. For such tasks, the image processing techniques were used with the only aid of

artificial intelligence tools such as back propagation neural networks in order to achieve the optimum and most accurate results.

The paper's Aim is to design for a robust system for the Detection of the different iris tumours utilizing Image processing techniques. Thus, any of the supplied knee image are must be processed, and then a tumour should be segmented using a canny edge detection algorithm in order to be marked then on the original image. The proposed system using iris image is obtained from the Public Databases available on the internet. The aim of this paper is also to perform image processing techniques, as well as artificial is the neural Networks and Their is a Interrelated Analysis method is to Health care, especially to begin eye tumours patients. The developed System means to do the Consequent detected the tumour into this iris located. This is can be of the Accomplish. By Removing of the tumorous Regions is the utilizing in diverse of the image processing methods is and techniques examined in the following areas.

LITERATURE SURVEY

1. dimililer K. kirsal EY, Ugur B. Tumour Detection on the CT Images has been using the Image Enhancement, International Science and Technology Conference.

Last Three Decades, Earlier cancer detection system and researches on early detection of the solutions play vital role for human health. CT techniques is been preferred compared to XRay and also MRI images. Image processing Techniques have been started to become very popular in use of CT images. In this study we are going to do, image preprocessing, image erosion, median filtering, and lastly thresholding and feature extraction of image processing techniques are applied on CT images in detail. The Aim of this Study is to the Develop and the image which will processed algorithm for eye cancer detection on CT Images.

2. World Health Organization Cancer will be leading cause of the death worldwide, accounting for nearly 10 million deaths in 2021. In 2018 the World Health Assembly was passed the Resolution Cancer prevention and control in the context of an integrated approach that urges governments and WHO to accelerate action to achieve the targets specified in the Global Action Plan for The Prevention of the Control of the NCDS 2013-2020 and also the 2030 UN Agenda for Sustainable of Development in to reduce of premature Mortality from cancers.

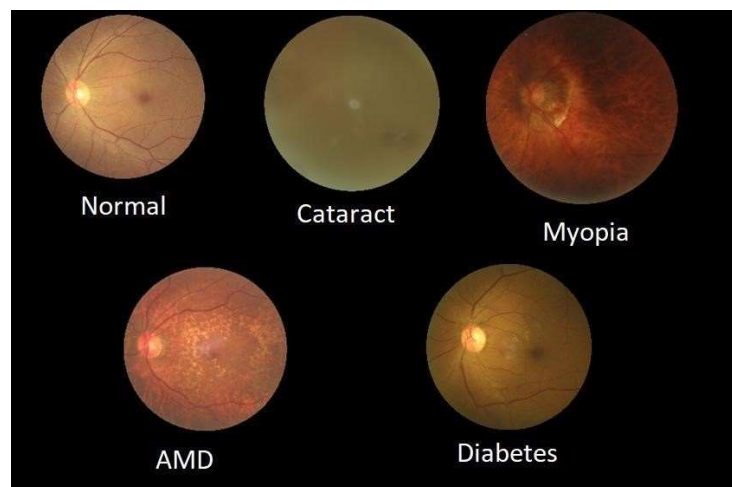
3. The other Diagnostic Methods are used. The Lindahl publishing Companies. Chicago; 1919. Eye is a sense organ in the human body. Many health organizations have recognized eye tumour as the dispute that causes a large number of human deaths all around the world. The most Competent and Effective Algorithms are discussed in this paper after studying a number of appropriate research papers. Pre-processing images, segmenting them, feature extraction, clustering and detection of the tumour are the methodologies in most researches.

4. Singh A-D, Topham A: Incidence of uveal melanoma in the United States:

To determine the incidence of the primary uveal Melanoma in the United States over a long 25 year period from 1973 to 1997. The mean age-adjusted this incidence happens of uveal melanoma (4.3 Per Million) in the whole United States is similar to that reported from European countries. The age adjusted incidence Rate of uveal melanoma has remained stable for the past 25 years.

5. Introduction to the melanocytic tumors of Uvea. In: Shield JA, Shield CL; Intraocular Tumors: A Text and Atlas. Philadelphia, Pa: Saunders, 1992

This PDQ cancer information summary for health professionals provides comprehensive, peer-reviewed, evidence-based information about the treatment of Intraocular Melanomas. In view of these little susceptibility factors are, numerous observational studies have attempted to explore the relationship between sunlight exposure and risk of uveal Melanomas.



Python :

Python is One And only an Interpreted, Object-Oriented, High-Level Programming Language With Dynamic Semantics; It has High-Level built-in Data structures, with Dynamic typing and dynamic binding. make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components Together. Python's Simple; Easy to learn and Syntax Emphasizes Readability and Therefore Reduces the cost of program Maintenance. Python supports modules and also packages, which encourages program modularity and code reuse. The Python is the one and only Interpreter and the Extensive Standards library are available in source or binary form without charge for all major Platforms, and can be Freely distributed.

Conclusion

In this Paper, Image processing and we also have Neural Network Approaches for the detection of eye tumours were developed. Image processing techniques is very useful and significant in the medical field such as in the PET-CT machine.

The Robustness in the Developed of the ETDS is to Notice the Presence of any Abnormality In the Eye directly by the first look. Also likewise, the System Marks in the upcoming abnormalities or also we can say Tumours in an iris Directly in the 0.41655 Seconds Which Makes our System Effective.

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3. Algorithms for Massive Data Lectures. Prof. Dario Malchiodi. University of Milan. <https://malchiodi.di.unimi.it/teaching/AMD/2019-20/>
4. TensorFlow documentation <https://www.tensorflow.org/>
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