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APPLICATION OF SEMANTIC SEGMENTATION NETWORKING BASED SEGMENTATION AND GOOGLENET CNN FOR MRI IMAGES OF BRAIN TUMOR

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ABSTRACT: In the medical field, BRAIN Tumor Segmentation is a quite challenging task due to different types of tumor appearances and also owing to alter characteristics like locality, and contrast. BRAIN cancer is generally diagnosed by a specialist called a neurologist. Imaging tests which are performed using a Magnetic Resonance Imaging (MRI) and Computed Tomography Scan uses computer technology to produce detailed pictures of the BRAIN. During the last decade, MRI was used to identify the BRAIN abnormality, to determine the location and size of the tissues. The segmentation process of medical image separates the image into a non-overlapped, consistent region, which is homogeneous according to the properties like intensity, color and texture. The property of segmentation is to make partitions in image which consist of complex in nature into a series of non overlapping and constituents based on some characteristic features such as shape, gray level, color, texture and size. Accurate segmentation of brain tumor is an indispensable component for cancer diagnosis and treatment. To improve the tumor detection and identify the tumor accurately with less execution time and also a multi-objective classification scheme Semantic segmentation networking based segmentation and GoogLeNet CNN is applied for classifying the BRAIN tumor.

KEYWORDS : Magnetic Resonance Imaging, GoogLeNet, CNN, Segmentation, Tumor

I. INTRODUCTION

One of the most common Brain diseases is Tumor. The diagnosis and treatment of this Brain disease have become a significant factor for more than 4 lack people per year in the world (as per the World Health Organization (WHO) estimate). In recent years, developments in medical imaging techniques are helping us in many dominions of medicine. Computer Aided pathological diagnosis, planning the surgical procedures and treatment and time series examinations.

Brain cancer has been identified as on the deadliest and adamant one. These tumors can be found in many areas of the Brain that are important to run the body's important tasks. The tumor cells spread to other parts of the Brain and create extra tumors that are very small to diagnose with the normal imaging techniques. Sometimes, it is difficult to diagnose the Brain cancers location and this makes it difficult to cure in those patients who have to suffer with this disease. In recent years, the number of cancer cases has increased compared to previous years. In primary stage of the tumor, it is difficult to recognize. Once it is diagnosed, the course of treatment like radiation, chemotherapy etc. can be planned but late diagnosis of tumor is fatal for the patients.Usually the symptoms of infections in Cancer is found little late, but Computer Supported Technology in diagnosing the tumor has been a wonderful step in medicine, like already applied in Neuro surgery.

II. PROBLEM STATEMENT

This research study on cloud storage retrieval and tumor of Brain aims at effective usage of advanced technology for medical related problems and also to discuss the upcoming developments and methodologies in the field of cloud storage. Some likely to happen problems in cloud storage retrieval and Brain tumor segmentation are i) High security and less computation cost of the auditor in a multi user setting is provided by