

Machine Learning and Deep Learning Approach for Medical Image Analysis Summary Generator

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Abstract: Colorectal cancer, which is frequent, recognized tumours in both genders around the globe. As per the report generated by WHO in 2018, colon cancer placed in the third position, whereas 1.80 million individuals are affected. Precisely, it is the succeeding leading cancer, which is the second most common cause of cancer in females, and the third for males. The loss of control over the integrity of epidermal cells in bowel or malignancy can be the cause of colorectal cancer. An effective way to recognize colon cancer at an early stage and substantial treatment can reduce the ensuing death rates to a great extent. To perform Screening of Morphology of Malignant Tumor Cells in the colon, a Gastroenterologist may refer to cancer diagnosis tests for pathological images. In any Histology method, the process takes a significant duration of time due to infinite numbers of glands in the gastrointestinal system, which may lead to irreconcilable outcomes. By diagnosing through computer algorithms, can give practical and contributory results. Hence, accurate gland segmentation is one crucial prerequisite stage to get reliable and informative morphological image data. In recent times, the scholars applied machine learning algorithms to pathological image analysis for the diagnosis of cancer disease. We propose that features extracted from the diagnostic tests, given as input to a machine learning architecture used along with semantic segmentation algorithm, provide results that are accurate than the existing image segmentation algorithms. This work is the extensive review of machine learning architectures used for semantic segmentation on the histological images of the colon. In our project we will be using the following algorithms such as Adaboost as existing and Convolution Neural Network (CNN) as proposed and its accuracy is been calculated and well compared to other algorithms. It is found that CNN performs less than other algorithms

Keywords: CNN(Convolution Neural Network), Machine Learning, Colorectal cancer