**Lung Cancer Detection & stages Identification using CNN algorithm**

Abstract

Image processing techniques are now commonly used in the medical field for early detection of diseases. This research aims to improve accuracy, sensitivity and specificity of early detection of lung cancer through a combination of image processing techniques and data mining. The Computed Tomography (CT) scan image of the lungs is pre-processed and the Region of Interest (ROI) segmented. In this project we are using CNN algorithm to detect Lung cancer from CT-SCAN images and to train CNN. We have CT-SCAN images dataset. Few images from ABNORMAL folder and we used above images to train CNN algorithm and after training CNN we can upload test images and then CNN will predict whether CT\_SCAN contains normal or abnormal tumour. CNN model gives accuracy of 97%.

Keywords : Computed Tomography (CT) scan , Convolutional Neural Network(CNN), Deep learning , accuracy.

**SOFTWARE AND HARDWARE REQUIRMENT SPECIFICATION**

**Hardware Requirement:**

• Processor Type: Pentium -IV

• ROM: 512 MB

• RAM: 4 GB

• Hard disk: 20 GB

**Software Requirement:**

• Operating System: Windows 2007/8/10

• Script: python