



PRESIDENCY UNIVERSITY

Private University Estd. in Karnataka State by Act No. 41 of 2013

Itgalpura, Rajankunte, Yelahanka, Bengaluru – 560064



SCHOOL OF INFORMATION SCIENCE

MCA Mini Project – Title & Abstract Submission Form

1. Project Details

Project Title: Detection of Lung Cancer in CT Images using Image Processing

Project Batch Number : MCA_MP_19

(Example: MCA_MP_07)

Domain/Area : Artificial Intelligence (AI)

(Domain: AI, Web, Data Science, IoT, Cybersecurity, etc.):

Group Members (Max 4, same section):

S. No.	Reg Number	Name of Student	Section	Signature
1	20242MCA0161	Rahul E	3MCA02	
2	20242MCA0162	Nithin D N	3MCA02	

2. Abstract (200–300 words)

Lung cancer remains the leading cause of cancer-related deaths worldwide, accounting for millions of fatalities each year. The survival rate of lung cancer patients is highly dependent on early detection, as timely diagnosis can significantly improve treatment outcomes. Traditionally, radiologists and physicians manually examine computed tomography (CT) scans to identify suspicious lung nodules. However, this process is not only time-consuming but also prone to human error due to the irregularities in nodule characteristics such as shape, size, location, and texture. These challenges highlight the urgent need for automated and reliable diagnostic tools.

In recent years, computer vision and deep learning techniques have shown remarkable success in medical image analysis, offering high accuracy in detecting and classifying abnormalities. In this study, we propose the application of a convolutional neural network (CNN) model based on the VGG16 architecture to assist medical professionals in lung cancer detection. The VGG16 model, known for its depth and strong feature extraction capabilities, is trained on medical image datasets to classify CT scan images into three categories: malignant, benign, and healthy. This automated classification system aims to reduce the workload of clinicians while improving diagnostic accuracy and consistency.

The proposed framework demonstrates the potential of deep learning to enhance lung cancer screening by minimizing subjectivity in diagnosis and enabling large-scale image analysis. By leveraging VGG16, the system provides a reliable and efficient approach for early lung nodule

detection, ultimately contributing to better clinical decision-making and higher patient survival rates.

3. Proposed Tools / Technologies to be Used

S.No	Category	Tools / Technologies
1	Programming Language	PYTHON, HTML, CSS, JS
2	Framework / Library	FLASK
3	Database / Storage	MYSQL
4	Development Platform	VSCODE
5	Others (if any)	

3. Supervisor Evaluation

Evaluation Criteria	Excellent (5)	Good (4)	Average (3)	Poor (2)	Very Poor (1)	Remarks
Relevance of Title						
Clarity of Abstract						
Scope						
Originality / Innovation						
Overall Impression						

Supervisor's Decision:

☐ Approved ☐ Revision Required ☐ Not Approved

Supervisor Name & Signature: _____

Date: _____