

Jyoti Prakash Singh · Maheshwari Prasad Singh ·
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Revised Selected Papers, Part II

Part 2

Jyoti Prakash Singh · Maheshwari Prasad Singh ·
Amit Kumar Singh · Somnath Mukhopadhyay ·
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Editors

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Advancing Lung Cancer Diagnosis and Prognosis Through Machine Learning Algorithm


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Computational Intelligence in Communications and Business Analytics
(CICBA 2024)

Sovan Bhattacharya , Saibal Majumder, Soujatya Banerjee, Astom Mondal, Ranit Mondal, Dola Sinha & Chandan Bandyopadhyay

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Advancing Lung Cancer Diagnosis and Prognosis Through Machine Learning Algorithm

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Abstract. Modern technology has made almost everything available at the touch of a button. But in our haste to stay up with these technological developments, our health frequently takes a back seat. The prevalence of numerous chronic diseases has increased as a result of this. Lung cancer is an example of a serious disease. Machine learning and similar approaches have been the subject of much discussion among researchers over their potential for accurate lung cancer prediction. We study machine learning algorithms with a particular focus on understanding how they handle different types of restrictions, such as changes in data quantity and test-train ratio. This research investigates the use of six different machine learning methods for predicting the occurrence of lung cancer: decision tree classifier (DTC), support vector machine classifier (SVMC), Naive Bayes classifier (NBC), logistic regression classifier (LRC), and random forest classifier (RFC).

Keywords: Datasets · Lung disease Prediction · Machine Learning · Clinical Data · Text tagging

1 Introduction

Modern technology has made almost everything available at the touch of a button. But in our haste to stay up with these technological developments, our health frequently takes a back seat. The prevalence of numerous chronic diseases has increased as a result of this. Lung cancer is an example of a serious disease. Machine learning and similar approaches have been the subject of much discussion among researchers over their potential for accurate lung cancer prediction. We study machine learning algorithms with a particular focus on understanding