

# Technology-Enhanced Collaborative and Blended Learning Ensemble Learning: An Approach in Artificial Intelligence

Swapnali G. Kadao<sup>1</sup>, Bhagyashri A. Jagtap<sup>2</sup>, Rasika V. Bodkhe<sup>3</sup>, Dr. Prajakta Ratnparkhi<sup>4</sup>

Assistant Professor, Kamla Nehru Mahavidyalaya, Nagpur, Maharashtra, India<sup>1,2,3</sup>

Assistant Professor, City Premier College, Nagpur, Maharashtra, India<sup>4</sup>

**Abstract:** *Progressive teaching methods are methods of improving teaching and learning performance. A variety of innovative teaching methods are now in use around the world. In addition to face-to-face classes, hybrid classes also include e-learning. The use of technology and multimedia is detailed. It covers the use of smart devices for various tasks such as teaching, designing surveys, assessing students, providing feedback, and research methodology. The application of innovative teaching and learning methods is very important if we want to inspire and arouse students' desire and enthusiasm for learning. The role of education is not only for faculty to teach, but to make it understandable to students from diverse cultural and linguistic backgrounds and to quickly familiarize them with the standards expected of them. It's common for students to drop grades because they don't know what level they're at or what their instructor expects of them. Teachers should therefore strive to use innovative methods in such a way that the student's learning process is as fluid as possible and the methodologies used are conducive to learning. Innovative teaching and learning methods such as short lectures, simulations, role-plays, portfolio development, and problem-based learning (PBL) are helping to keep pace with rapid technological advances and develop the jobs needed in the near future. Decades ago, in the field of machine learning and data mining, the development of methods of ensemble learning received significant attention from the science community. Machine integration techniques incorporate multiple learning acquisition skills and better performance of guesswork than you would find in any available learning skills alone. Combining multiple learning models is demonstrated in thought and experimentation providing better performance than single-foundation students. In a book, mix learning algorithms form a dominant and high-level approach to high throughput performance, thus applied to real-world problems ranging from face-face-to-facotional recognition through classification and medical diagnosis in financial forecasting.*

**Keywords:** Data Mining, Ensemble Learning, Emotional Recognition, Financial Forecasting.

## I. INTRODUCTION

The main purpose of this paper is to present the latest developments related to all genres of ensemble learning algorithms, frameworks, and research methods, and the impact of their performance on the diversity of the problems of the real world. Over the decades, the development of ensemble learning methods and techniques has received much attention from the scientific and industrial communities. The basic concept behind these methods is a combination of a set of various predictive models for obtaining a global integration model that produces reliable and accurate measurements or speculation. Theory and exploration evidence have proven that combination models provide much better predictive performance than one model. Along with this line, various learning skills and techniques have emerged they developed and acquired their app with various categories and reversed real word problems.

## II. ENSEMBLE LEARNING AND APPLICATIONS

One of the applications regarding ensemble learning is an algorithm for the Detection of Lung Abnormalities from X-Rays collectively targeted learning algorithm based on the abnormal separation of the lungs from Chest X-rays was developed. The proposed algorithm uses a new weighted voting system that provides a vector of instruments for each part according to its accuracy in each class. The proposed algorithm was extensively tested on three world-famous real-