

# ABSTRACT

Artificial intelligence (AI) comprises various sub-fields, including machine learning (ML) and deep learning (DL) perform a key role in the transformation of many industries, including education. It changes traditional learning methods by using its Innovative techniques and applications. Using its applications, the teachers may keep track of each student's development, paying close attention to the areas in which they struggle. Many researchers are working with ML and DL to exploit its discoveries and insights. In education, traditional education methods (TEM) are the same for each student, which means each student is taught in the same way as ML and DL, making this process flexible and creative for solving complex problems and enhancing productivity. Nowadays, each institution adopts E-learning methods as the primary way of learning, especially during the pandemic. Despite this evolution of creativity, delivering quality education, making strategies for analyzing performance and future goals, and career counseling for students still pose challenges. Its aim is to provide insights into the applications of these techniques and offer optimal solutions to the research questions at hand. We are convinced that our complete assessment will be a dependable resource for the research group in ascertainment the best approach and information source for their unique needs. Moreover, our findings provide valuable insights on the subject matter that could aid the research community in their future endeavors in the related field.

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