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(57) Abstract :
This invention presents a hybrid model for predicting outcomes using both supervised and unsupervised learning techniques applied to Big Data. The approach integrates advanced technologies like Machine Learning (ML), and big data analytics to enhance health data analysis, illness prediction, and pandemic preparedness. Specifically, the method proposes a hybrid ML technique for forecasting disease outbreaks, offering an alternative to traditional SIR models, with potential applications for early detection and risk assessment. The system employs unsupervised learning to identify potential future scenarios and supervised learning to analyze labeled data for illness prediction. This predictive model is designed to address the challenges of managing and analyzing large datasets by using high-performance computing platforms. By leveraging recent advancements in AI and machine learning, the system provides a scalable, secure, and efficient solution for data analysis and decision-making. It enables effective identification of outliers and data anomalies, ensuring high accuracy in dynamic, real-time data environments. The proposed method can significantly improve data-driven insights in healthcare, business, and other industries, providing a powerful tool for addressing complex, data-driven challenges. A key component in transforming this technology to improve the world is machine learning (ML). Designing interactive machines is made possible by approaches and strategies built into machine learning (ML) technologies. The performance of supervised and unsupervised machine learning algorithms for illness prediction is the main topic of this study's investigation of ML applications in Data Engineering. In order to forecast illness risk, this study intends to discover significant trends in the performance of supervised and unsupervised machine learning systems.

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