**Abstract**

There is a rapidly evolving role of deep learning and machine learning in human genomics, particularly in prediction of genetic diseases such as diabetes, hair loss (alopecia), polycystic ovary syndrome (PCOD/PCOS). The genomic field has become data-driven with the usage of high technologies and there is a need for sophisticated computational tools to identify important patterns from complex large datasets. Specifically, Deep learning and machine learning has revolutionized genomics across many subareas by empowering the prediction and diagnosis of genetic disorders. Deep learning, has pivot role in various subfields of genomics, enhancing the ability to predict and diagnose genetic disorders. These technologies play a pivot role in improving the ability to predict and diagnose conditions like diabetes, hair loss, PCOS/PCOD, providing more accurate and personalized medical insights. It offers timely guidance on how to effectively apply these methods to advance the field of genomics and improve patient care through more accurate and personalized predictions. where deep learning or machine-learning models are trained on clinical attested data and used to test the likelihood that death will be caused by different causes of mortality based in genomics. The review highlights recent developments in machine learning algorithms, includes computationally efficient model for predicting genetic diseases, which achieved high accuracy and recall rates, outperforming traditional clinical methods in predicting patient outcomes. The ability to use such models to predict genetic diseases represents a major leap forward in precision medicine and healthcare computing by using deep learning and machine learning technologies.