1 ABSTRACT

Many neurological diseases, such as cerebral palsy, can significantly affect the ability of a patient to walk without assistance. Timely and accurate diagnosis and treatment are critical for the best possible outcomes. However, diagnosing cerebral palsy can be challenging, especially when symptoms are subtle and may not be immediately apparent.

This study aims to develop a machine learning model that can accurately detect cerebral palsy based on gait analysis. The proposed method involves collecting gait data from patients and using machine learning algorithms to classify them into normal and cerebral palsy categories. The model was trained using a dataset of gait patterns collected from patients with and without cerebral palsy.

2 OBJECTIVE

The objective of this study is to develop a machine learning model that can accurately classify gait patterns into normal and cerebral palsy categories. The model aims to provide an early diagnosis tool for cerebral palsy, which can help in timely intervention and effective treatment.

3 OUTCOME

The developed machine learning model achieved an accuracy of 92% in classifying gait patterns into normal and cerebral palsy categories. The model performed well in identifying subtle symptoms associated with cerebral palsy and showed promising results for early detection.

4 CONCLUSION

A constraint-based method to analyze the gait patterns was used, with the ability to recognize healthy features by working with the data of healthy patients. If the pattern is not recognized as healthy, then there is to be pathology, otherwise more information might be needed. The incorporation of a method that needs to be done repetitively to find a solution, and therefore eliminating the time the patients have to be in therapy for analyzing their problem and giving a faster solution that will address the problem of the patients.

5 FUTURE WORK

There is work to be done on algorithms and machine learning models to enhance the accuracy and efficiency of the system. A better understanding of the factors that contribute to the development of cerebral palsy will aid in identifying patients at risk and developing early intervention strategies.

6 REFERENCES