Literature survey on

Dectecting Parkinson's Disease using Machine Learning .

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Abstract

Machine learning is a subfield of artificial intelligence, which is broadly defined as the capability of a machine to imitate intelligent human behavior. Artificial intelligence systems are used to perform complex tasks in a way that is similar to how humans solve problems. The researchers found that the drawing speed was slower and the pen pressure is lower among Parkinson's patients. One of the indications of Parkinson's is tremors and rigidity in the muscles, making it difficult to draw smooth spirals and waves. It is possible to detect Parkinson's disease using the drawings alone instead of measuring the speed and pressure of the pen on paper. Our goal is to quantify the visual appearance(using HOG method) of these drawings and then train a machine learning model to classify them. In this project, We are using, Histogram of Oriented Gradients (HOG) image descriptor along with a Random Forest classifier to automatically detect Parkinson's disease in hand-drawn images of spirals and waves.

Book/journal	Author's name	Inference
An Expert diagnosis system for Parkinson's Disease based on Genetic Alogorithm, 2016.	Mr.Derya Avci, Mr.Akif Dogantekin.	The Paper proposed an expert disease diagnosis system using wavelet kernel (WK) and Extreme learning machine (ELM) Genetic Algorithms. The classifiers used in this paper is Single Layer Neural Network (SLNN) and it is trained by ELM learning method. In the calculated highest classification accuracy of the proposed GA-WK-ELM method is found as 96.81%.
Early detection of Parkinson's Disease using Machine Learning, 2020 .	Ms.R.Anitha, Ms.T.Nandhini, Mr.S.Sathish Raj, Ms.V.Nikitha.	The Objective of the paper is to make the system to provide accurate results by integrating spiral drawing I/p of normal and parkinson's affected patients. Random Forest Classification Algorithm is used in this method.

Machine Learning Technique Based on Parkinson's Disease Detection from Spiral and Voice Inputs,2020.	Mr.S.Jaichandran, Ms.S.Leelavathy, Ms.S.Usha Kiruthika, Mr.Gouthamkrishna, Mr.MervinJohn Mathew, Mr.Jomon Baijis.	This Proposed System invokes parkinson's disease detection using voice and spiral drawing dataset. The patient voice dataset is analyzed using Rstudio with k-means clustering and decision tree based machine learning techniques. The patient spiral drawing is analyzed using python from these drawing Principal Component analysis (PCA) Algorithm.
The Parkinson's Disease Detection using Machine Learning Techniques VOL:08, 2021.	Dr.CK.Gomathy, Mr.B.DheerajKumar, Ms.B.Varsha, Ms.B.Varshini.	The main aim of the paper is to test the ability of the motor function of the patient with Parkinson's Disease.The scope of this project is to show the high accuracy to detect the Parkinso's Disease in Early Stages.
A Comparative Study of Machine Learning Model for Parkinson's Disease Detection,2022	Mr.Chayut Bunterngchit.	This paper Formulates 10 Machine Learning based Predictive model on a bio-medical voice measurement dataset. Genetic Algorithm applied as a future Selection Algorithm.The improvement in accuracy after applying this Feature Selection Algorithm is 16.33%.