Detecting Parkinson’s Disease Using Machine Learning

SUBMITTED BY

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S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	User needs an application that takes images and analyses the drawing speed and detects if the patient has Parkinson's disease or not
2.	Idea / Solution description	Our goal is to quantify the visual appearance(using HOG method) of Parkinson's disease using the 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.
3.	Novelty / Uniqueness	Using various algorithms we have simplified the process of detecting Parkinson's disease by analyzing various images of drawings made by the patients and the pen paper pressure of it
4.	Social Impact / Customer Satisfaction	People are lacking knowledge about these kinds of disease and most of it goes unidentified at the initial stage Parkinson's cannot be cured, but early detection along with proper medication can significantly improve symptoms and quality of life.
5.	Business Model (Revenue Model)	As diseases like Parkinson's are rarely concerned and identified by the patients, creating an application and making people aware will cause a great change leading to the most health benefits among the users. As more people register the subscription methods can be included and the revenue for further improvisation can be achieved. The images uploaded by the users can be used for research purposes by scientists and can also generate revenue for the business.
6.	Scalability of the Solution	High-speed algorithms are used here, to analyze the humongous amount of data and retrieve the accuracy of the result.