Detecting Parkinson’s Disease Using Machine Learning

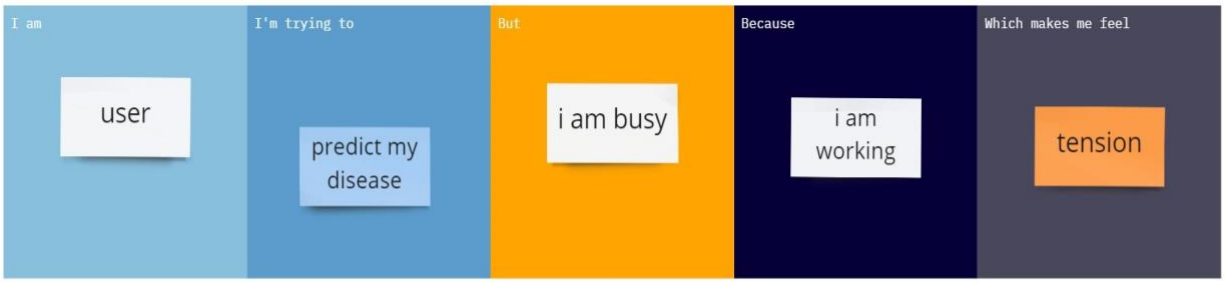
Date	26 September 2022
Team ID	PNT2022TMID50876
Project Name	Project – DETECTING PARKINSONS DISEASE USING MACHINE LEARNING
Maximum Marks	2 Marks

Problem Statement

Parkinson's disease is a progressive disorder that affects the nervous system and the parts of the body controlled by the nerves. Symptoms start slowly. The first symptom may be a barely noticeable tremor in just one hand. Tremors are common, but the disorder may also cause stiffness or slowing of movement.
In the present decade of accelerated advances in Medical Sciences, most studies fail to lay focus on ageing diseases. These are diseases that display their symptoms at a much advanced stage and makes a complete recovery almost improbable. Parkinson’s disease (PD) is a member of a larger group of neuromotor diseases marked by the progressive death of dopamine producing cells in the brain. Providing computational tools for Parkinson disease using a set of data that contains medical information is very desirable for alleviating the symptoms that can help the amount of people who want to discover the risk of disease at an early stage. Parkinson’s disease (PD) is the second most commonly diagnosed neurodegenerative disorder of the brain. One could argue, that it is almost incurable and inflicts a lot of pain on the patients. All these make it quite clear that there is an oncoming need for efficient, dependable and expandable diagnosis of Parkinson’s disease. A dilemma of this intensity requires the automating of the diagnosis to lead accurate and reliable results. It has been observed that most PD Patients demonstrate some sort of impairment in speech or speech dysphonia, which makes speech measurements and indicators one of the most important aspects in prediction of PD. The aim of this work is to develop an effective and accurate model in order to help diagnose the disease accurately at an earlier stage which could in turn help the doctors to assist in the cure and recovery of PD Patients.

Who does the problem affect ?	Genetics. Individuals with a parent or sibling who is affected have approximately two times the chance of developing Parkinson's.
What are the boundaries of the problem?	When nerve cells in the basal ganglia, an area of the brain that controls movement, become impaired and/or die ,the person is affected by Parkinson’s disease
What is the issue?	Parkinson's disease is a progressive disorder that affects the nervous system and the parts of the body controlled by the nerves.
When does the issue occur?	Parkinson's disease is caused when loss of nerve cells in the part of the brain called the substantia nigra. Nerve cells in this part of the brain are responsible for producing a chemical called dopamine.
Where does the issue occur?	Parkinson's disease is caused in the part of the brain called the substantia nigra.
Why is it important that we fix the problem?	Parkinson's disease does not directly cause people to die, but the condition can place great strain on the body, and can make some people more vulnerable to serious and life-threatening infections.

What solution to solve this issue?	Parkinson's disease can't be cured, but medications can help control the symptoms, often dramatically. In some more advanced cases, surgery may be advised. Prediction is made to predict the presence of the disease by analysing the factors.
What methodology use to solve the issue?	Machine learning algorithms are used to predict whether the person has disease or not.



Problem Statement (PS)	**I am (Customer)**	**I'm trying to**	**But**	**Because**	**Which makes me feel**
PS-1	I am a cutomer.	I am trying to check my disease.	But I unable to know deeply.	Because I am busy in my work.	Which makes me sad.
PS-2	I am a customer.	I am trying to predict my disease.	But I don't like to spend time more on it.	Because I am busy in my work.	Which makes me little tension.