Project Design Phase – I

Solution Architecture

Date	01-10-2022
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Project Name	Detecting Parkinson's Disease using Machine Learning

Objective:

Diagnosis of Parkinson's Disease (PD) is commonly based on medical observations and assessment of clinical signs, including the characterization of a variety of motor symptoms. However, traditional diagnostic approaches may suffer from subjectivity as they rely on the evaluation of movements that are sometimes subtle to human eyes and therefore difficult to classify, leading to possible misclassification. In the meantime, early non-motor symptoms of PD may be mild and can be caused by many other conditions. Therefore, these symptoms are often overlooked, making diagnosis of PD at an early stage challenging. To address these difficulties and to refine the diagnosis and assessment procedures of PD, machine learning methods have been implemented for the classification of PD and healthy controls or patients with similar clinical presentations.

Decision and Assumptions:

Decision: The solution must be a web application built using flask framework and the prediction must be done using OpenCV.

Assumptions:

The team must have knowledge about:

- Supervised and Unsupervised Learning
- Regression, Classification and Clustering
- Random Forest Classifier and Decision Tree
- Flask - Beginner Level

Context View: