ABSTRACT

Parkinson’s Disease is a neurodegenerative disorder of dopamine systems. It can be treated but the effectiveness of pharmacological options faces diminishing returns and anything that might reduce the occurrence of overmedication would have strong positive impact. [PREVIOUS PAPER] collected data comparing features of speech in 52 individuals diagnosed with Parkinson’s and analyzed it using deterministic linear regression. In this work, we used various Data Mining tools to prepare and analyze the data speculatively in order to discover interesting information for use in Machine Learning or other subsequent analysis. K-means methods showed [WHAT k-MEANS SHOWED] while OPTICS showed [WHAT OPTICS SHOWED]. DBSCAN was not viable due to [REASON NOT VIABLE]. Validation of clustering was performed using [METHOD FOR VALIDATION]. Classification after Data Mining was performed using SVM [SPELL THAT OUT]. We also approached the problem as an Association Rule problem and discovered [WHAT DOES IT MEAN]?

Key Words: Data Mining, k-means, k++, OPTICS, DBSCAN, Parkinson’s Disease, SVM