

Identifying Subtypes of Parkinson's Disease Using Clustering and Dimensionality Reduction Techniques

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Parkinson's disease (PD) is a progressive neurological disorder characterized by the gradual loss of dopaminergic neurons in the substantia nigra pars compacta. Despite presenting with well-defined core motor symptoms such as bradykinesia, rigidity, tremor, and postural instability, PD exhibits considerable clinical diversity, with patients displaying differing symptom patterns, rates of disease progression, and responses to treatment. This clinical diversity suggests the potential presence of distinct PD subtypes. This study aimed to employ clustering and dimensionality reduction techniques to identify potential PD subtypes based on clinical features and medication usage data.

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