An Explainable Machine Learning Model for Parkinson's Disease Detection using LIME on DaTscan Imagery

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Abstract

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1. Introduction

Parkinson's disease (PD) is a neurodegenerative disorder that affects predominately dopamine-producing (dopaminergic) neurons in a specific area of the brain called substantia nigra [1]. Dopamine is an organic chemical which functions both as a hormone and a neurotransmitter playing important roles in the brain and body. In Parkinson's disease a patient loses the ability to retain these dopamine-producing neurons which causes a loss of control over any voluntary actions. This may lead to motor and non-motor symptoms such as tremors, slowed movement, sleep disorders, posture imbalance, depression etc. [**?**].

References

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