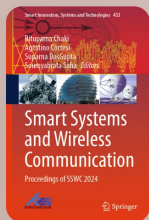


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Parkinson: A Web-Based Parkinson's Disease Detector Based on Machine Learning to Detect the Presence of Parkinson's Disease in Human Beings

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Abstract

This paper presents an effective web-based approach for diagnosing Parkinson's Disease using deep learning algorithms. Our architecture combines MLP and SVM models, enhanced by SMOTE to address class imbalance, ensuring equal distribution among all classes. We employed GridSearchCV during training and testing to optimize model accuracy, achieving 91.6% accuracy, 89% precision, and 88% recall. The final model, saved as a pickle file, is integrated into a Flask server powering the web application. This application allows users to input data and receive predictions about Parkinson's Disease, with an interface designed using HTML and CSS for responsiveness and ease of use. The model offers a significant advancement in diagnosing Parkinson's Disease, providing a user-friendly tool accessible to medical professionals, diagnostic centers, doctors, and the general public. Our study addresses previously overlooked challenges in this domain, offering a timely diagnosis solution. The model's potential extends to future app-based versions for mobile and other electronic devices, further increasing accessibility.

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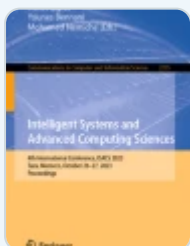
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