**ABSTRACT**

This study explores the application of machine learning algorithms for the simultaneous detection of diabetes, heart disease, and Parkinson's disease using Python. Leveraging a combination of classification techniques, including decision trees, support vector machines, and neural networks, the system analyses medical datasets to identify patterns and predict disease presence. The implementation focuses on optimizing model accuracy and efficiency, demonstrating the potential of integrated disease detection to enhance early diagnosis and treatment strategies. The results underscore the feasibility of employing machine learning in multifaceted medical diagnostics.

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**Akash Kumar (1CE21IS002)**

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