Daniel Akama Nyamweya

AI in health Group Project 23

Title:

AI-Driven Pneumonia Prediction: A Data-Centric Approach Using Machine Learning

Abstract:

Pneumonia remains a leading cause of morbidity and mortality worldwide, making early detection and prediction is crucial for improving patient outcomes. This research explores the application of artificial intelligence (AI) in pneumonia prediction using structured clinical datasets. By leveraging machine learning techniques, the study aims to develop a predictive model capable of identifying pneumonia risk based on patient demographics, symptoms, laboratory results, and other relevant features. Various machine learning algorithms, such as decision trees, support vector machines, and deep learning models, will be evaluated for performance. The study will also review existing AI-driven pneumonia prediction models and benchmark their effectiveness. This research seeks to contribute to AI's role in clinical decision support systems, enhancing diagnostic accuracy and facilitating timely interventions in healthcare settings.