FORECASTING ADMISSIONS AND RELATED MEDICAL RESULTS

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Abstract - The medical sector has devoted in health technologies, big data and integrating machine learning models in their daily. These stages make vital medical information obtainable that can save lives and costs, and include advanced techniques. Predictive analytics can take advantage of medical data by defining the type and timing of clinical interventions for Liver disease patients.This research in progress paper analyzes admission outcomes in Liver disease patients. It shows the feasibility of using classification methods on big data accounting on medical data. It took a medical database with all inpatient visits. After collecting the data and data preprocessing processes, we build prediction models (e.g. Boosting decision trees and Neural Networks) by joining all factors driving admissions' risks to produce actionable steps. Over two thousand admissions due to Liver disease (with independent and dependent variables) were mined to yield the findings. The forecast results show that readmission has a higher forecasting score among all other dependent variables. Moreover, the valuation of the possible factors causing multiple problems can propose actionable medical steps. The paper shows the value of using machine learning models' analytics and can help use medical databases.

Keywords - Machine-Learning, Admissions, Liver disease.