

Machine Learning Strategies for Medical Assessment

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Abstract: *Subfield of AI, is going to change the healthcare industry forever. However, it is not yet considered part of standard of care, especially when it comes to the treatment of specific patients. Whether or not data-driven methods are being used to support clinical making a Call (CDS). To date, there has been no comprehensive analysis of how research in machine learning and other data-driven techniques might effectively contribute to clinical care and what kinds of support they can bring to doctors. In this study, we investigate the potential contributions to clinical decision support systems of two data-driven fields: machine learning and data visualization. Here, we survey the research on three distinct CDS and how heuristic knowledge, machine learning, and visualization are now being used to analyse and improve them. Predictive modelling for alerts has been the subject of extensive study, although this technology is not yet integrated into CDS systems. Interactive visualizations and machine learning inferences are gaining popularity as a means to organize and review patient data, however these methods are still in the prototype stage and have not been implemented. We still lack CDS systems that could take use of prescriptive machine learning (e.g., individualized therapy suggestions). Possible explanations for the slow adoption of data-driven approaches in CDS are offered, along with suggestions for future study in this area. Clinical decision assistance; Visual analytics; Machine Learning.*

Keywords: Decision Tree Algorithm, Support Vector Machine, Random Forests

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