Outlier detection for clinical monitoring and alerting

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Outlier detection has been successfully applied to identification of unusual data instances, unusual behaviors and outcomes. In this work, I present an outlier detection framework for clinical monitoring and alerting that aims to identify unusual patient management actions in electronic health record data. Our hypothesis is that patient-management actions that are unusual with respect to past patients may be due to errors and that it is worthwhile to raise an alert if such a condition is encountered prospectively. Our methodology was tested on data derived from electronic health records, and the quality of alerts was evaluated using a panel of clinicians. Our results support that outlier-based alerting can lead to reasonably low false alert rates and that stronger outliers are correlated with higher alert rates

I dottorandi e gli interessati sono caldamente invitati a partecipare

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