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Unveil the power of statistics through Open Source Software

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In the modern world, researchers use statistical software packages like SPSS, SAS, STATA, Minitab for advanced data analyses. However, license cost of these statistical software packages is a major problem for researchers in the developing countries. R, is a GNU project, which provides a solution for the above problem through open source technology, with powerful statistical environment, being a programming language itself.

The objective of this research project is to provide statistical assistance and a public healthcare monitoring facility, using a web based statistical tool and interactive dashboard with the integration of R with java , html, java script and mysql database for a Public Health Information System. The system has the ability to access through an intranet and statistical functions are classified into basic, intermediary and advanced functions. The interactive dashboard facility of the system facilitates users with different levels of authority to define the content displayed on the dashboard.

One of the innovative features includes the auto-run of predefined advanced statistical analyses when the quality of the public healthcare data is below or above certain thresholds. This will promote collaborative research and assist public health care professionals and predict and identify disease outbreaks, epidemics, and analyze data at different geographical levels. The system will be validated through cross field and parameter dependencies defined at interface level, as well as reports generated through alerts and through healthcare professionals' expert opinions.

Keywords : Programming Language, Public Healthcare Information, Interactive Dashboard, Collaborative Research