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An intelligent statistical consultant

Statistics has been one of the major tools involved in data analysis and forecast accordingly. In reality when a data set is collected some of the crucial questions arise about the sufficiency, completeness of data sets and applicable techniques. Since all these questions are heuristics-driven the most reliable method is to consult an expert statistician. Their time is very expensive. The only alternative is to use statistical packages. When using such packages the method of analysis should be known beforehand. This becomes a complicated process if the person analysing the data set is a novice. Therefore we argue that all these difficulties can be overcome by developing an expert system for consulting service of a statistician.

We have been working in a project to develop an Intelligent System of emulating the role of a statistician. The Intelligent System will exhibit the capabilities and characteristics of expert systems such as decision making and providing advice for clients. The system will be able to accept a client request, do a validity check of the sample and will proceed with the analysis. Depending on the sample size either non-parametric/model development will be carried out. The results obtained will be interpreted accordingly. In addition the system will be capable of making a suitable clue when client data are incomplete. The system can be used as a support tool for expert statisticians during their Consultancies and as a learning /teaching tool for novel statisticians and students. The development of the system is being done on windows platform. The expert system shell FLEX/LPA-Prolog is used for the implementation