SOME APPLICATIONS OF GENERALISED LINEAR MODELS

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The concept of Generalised Linear Models (GLMs) was first introduced by Nelder and Wedderburn (1972). GLIM is a comprehensive statistical package which enables GLMs to be fitted. The main aim of this paper is to show how GLIM can be used effectively by researchers in Sri Lanka.

Three case studies are considered. The first shows how CLIM can be used to model daily rainfall amounts. A log link with gamma errors is used. The second illustrates the use of GLIM in the analysis of developmental milestones of children in the age range 1 - 5 years. A logit link with binomial errors is used here. The third demonstrates the flexibility of GLIM in analysing contingency tables. A log link with posson errors is used.

Most statistical techniques make the fundamental assumption that either the original data or some transformation of it follow a normal distribution. The illustrations highlight the flexibility of the concept of GLMs, in particular their ability to deal with data sets where the assumption of normality is not justfied. GLIM provides a flexible frame work for fitting a wide variety of models without assuming normality.

References

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