Fitting Flexible Parametric Regression Models with GLDreg in *R*

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This presentation outlines the functionality of **GLDreg** package in *R* which fits flexible parametric regression models using generalised lambda distributions (GLDs) via maximum likelihood estimation and L moment matching. Once the GLD regression model is obtained, parametric quantile regression model can then be estimated. The quality of regression model is assessed using QQ plots and Kolmogrov- Smirnoff goodness of fit test and an overall summary plot of regression coefficients are also given as part of the regression model output. The main advantage of **GLDreg** is the provision of robust regression lines and smooth regression quantiles beyond the capabilities of existing known methods. This work is a direct implementation of Su (In Press) and uses **GLDEX 2.0.0.0** (Su 2007, Su 2010).

References

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[3] S. Su (In Press). "Flexible Parametric Quantile Regression Model" *Statistics and Computing.*