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Book description

An emerging field in statistics, distributional regression facilitates the modelling of the complete conditional distribution, rather than just the mean. This book introduces generalized additive models for location, scale and shape (GAMLSS) – one of the most important classes of distributional regression. Taking a broad perspective, the authors consider penalized likelihood inference, Bayesian inference, and boosting as potential ways of estimating models and illustrate their usage in complex applications. Written by the international team who developed GAMLSS, the text's focus on practical questions and problems sets it apart. Case studies demonstrate how researchers in statistics and other data-rich disciplines can use the model in their work, exploring examples ranging from fetal ultrasounds to social media performance metrics. The R code and data sets for the case studies are available on the book's companion website, allowing for replication and further study.