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MASTER'S THESIS PRESENTATION

Study of the Mixed-Effects Location Scale Model and Its Applications.

WHEN
April 28, 2022
3:00 PM

WHERE
Zoom Meeting

Wenqi Yan, MS candidate

The mixed-effects location scale model is an extension of the mixed-effects model, which allows for incorporating random effects when modeling the variance component. The two-part mixed-effects location scale model further allows for the modeling of data sets with a lot of zeros, which is commonly encountered in practice, such as the measure of physical activities for humans. We have reviewed some current methods of mixed-effects location scale model in our paper, and then we further propose a generalized version of it using the generalized gamma link, which makes the method more flexible by allowing for more distributional probabilities. Simulations are done to confirm the superiority of the new method in terms of estimation accuracy and interpretability. What is more, we are also using the new method to reanalyze an intensive longitudinal data set concerning changes in health behaviors, trying to gain new insights from it.

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