Title:

Tree-based varying coefficient regression for longitudinal ordinal responses

Abstract:

I propose a method that aims to learn if and how the effects of predictors depend on moderating variables. The algorithm presented is based on the two-stage cumulative logit mixed model and it builds piecewise constant fixed coefficient functions. Moreover, it is scalable for many moderators of possibly mixed scales, integrates interactions between moderators and can handle nonlinearities. The potential of the algorithm is illustrated by using data derived from the British Household Panel Study, to show how the effect of unemployment on self-reported happiness varies across individual life circumstances.