2023년 제 8회 통계세미나

고려대학교 통계연구소와 BK21 통계학교육연구팀, 그리고 DS+가 다음과 같이 공동으로 세미나를 개최하오니 많은 참여 바랍니다.

일시 : 2023년 5월 26일(금) 오전 11시
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Nonparametric predictive model for sparse and irregular longitudinal data

<Abstract>

We propose a kernel-based estimator to predict the mean response trajectory for sparse and irregularly measured longitudinal data. The kernel estimator is constructed by imposing weights based on the subject-wise similarity on L2 metric space between predictor trajectories, where we assume that an analogous fashion in predictor trajectories over time would result in a similar trend in the response trajectory among subjects. In order to deal with the curse of dimensionality caused by the multiple predictors, we propose an appealing multiplicative model with multivariate Gaussian kernels. This model is capable of achieving dimension reduction as well as selecting functional covariates with predictive significance. The asymptotic properties of the proposed nonparametric estimator are investigated under mild regularity conditions. We illustrate the robustness and flexibility of our proposed method via the simulation study and an application to Framingham Heart Study.

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