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Variable selection in finite mixture of survival models

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Variable selection in high dimensional spaces has been extensively studied in different settings in the recent statistical literature. In some applications, finite mixture of regression (FMR) models is often used to capture heterogeneity in the population. Variable selection in FMR models has been recently studied. However, such methodologies are not applicable to follow-up studies on time-to-event data when data is incomplete. In this talk, the author will consider variable selection in FMR models when observations are subject to right censoring. The author will propose a penalized likelihood method and study its large sample properties. Simulations are carried out to evaluate the performance of the proposed method and a real data is analyzed for illustrative purposes.

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