

Generalized Estimating Equations for Social Network Data

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The method of using generalized estimating equations (GEE) for correlated response data (both longitudinal and clustered) is widely employed across many disciplines. Social network data tends to have more complicated correlation structures than longitudinal or clustered data. I will introduce GEE for social networks, in which I will extend the GEE approach to correlation structures based on social network connections, and allow for the incorporation of sampling weights. The proposed method is flexible in that it can be applied to ego network data, respondent-driven sampling data (in which a network is sampled through multiple distinct referral trees), and any network data where there are a sufficient number of unconnected network components.