

Regression Association and Its Measurement

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Abstract

Measures of regression association aiming at the predictability of a dependent variable Y from an independent variable X have received considerable attention recently. In this talk, we give a brief introduction to the concept of regression association and its measurement. This type of association between random variables arises naturally in the regression setting. Classical association measures such as Pearson's correlation coefficient, Spearman's rho, and Kendall's tau can only capture the degree of inter-variable association and are symmetric. On the other hand, regression association measures are asymmetric and hence they can capture directional relationships between random variables. This talk will focus on the key ideas of the regression association measures and their nonparametric estimation methods. Real data examples are presented for illustration.