Behind Fuzzy Regression Approach: An Exploration Study

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Abstract : The exploration study of the fuzzy regression approach attempts to present that fuzzy regression can be used as a possible alternative to classical regression. It likewise seeks to assess the differences and characteristics of simple linear regression and fuzzy regression using the width of prediction interval, mean absolute deviation, and variance of residuals. Based on the simple linear regression model, the fuzzy regression approach is worth considering as an alternative to simple linear regression when the sample size is between 10 and 20. As the sample size increases, the fuzzy regression approach is not applicable to use since the assumption regarding large sample size is already operating within the framework of simple linear regression. Nonetheless, it can be suggested for a practical alternative when decisions often have to be made on the basis of small data.