

Diagnostic and Remedial Workshop on Regression Analysis with R

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ABSTRACT

Linear regression is a statistical method that aims to examine the effect of a variable on other variables or linear relationships of variables with other variables. Linear regression also aims to predict a variable from another variable. Problems that often arise in statistical data analysis, especially in regression analysis are (i) violations of regression assumptions such as normality, autocorrelation, heteroscedasticity, multicollinearity, and (ii) the existence of outlier data that affects the regression model.

Violations of assumptions and neglect of influential outliers / outliers can cause the model obtained is not good. Knowledge of diagnostic and remedial methods in regression analysis is absolutely necessary.

Diagnostic and remedial workshops on Regression Analysis with R were held on 30 and 31 July 2018 in the computer laboratory of the Mathematics Education Department of FMIPA UNY on the 3rd floor. The training was attended by 25 participants consisting of S1 graduate practitioners and teachers. The speakers in this training were members of PPM team. The method used in the workshop is direct tutorials and good practice. This training begins with the initial introduction of the R program by practicing how to download and install the R program, recognizing objects and basic command commands in R. Basic theories of diagnostic and remedial methods graphically and statistical tests are given as a basis for using several functions in R such as `vif`, `qqnorm`, `adtest`, `lillie.test`, `ncvTest`, and `dwtest`.

Based on the results of the questionnaire, observations and question and answer with the training participants, it appears that the participants were eager to take part in the training activities. Participants can use the instructions for diagnostic and remedial methods and can provide interpretations of the output obtained in R.

Kata Kunci: *diagnostics, remedial, regression analysis, R*