

# LAB SESSION 11 – MULTIPLE LINEAR REGRESSION

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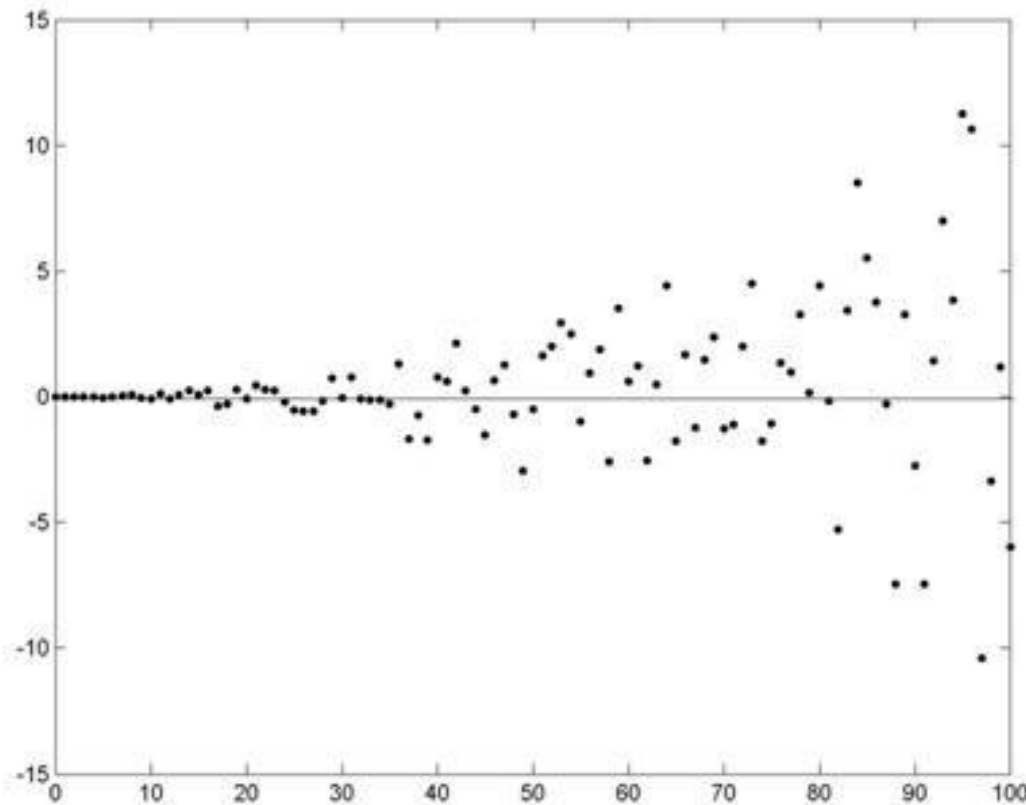
Analytics Primer

# RESIDUAL ANALYSIS

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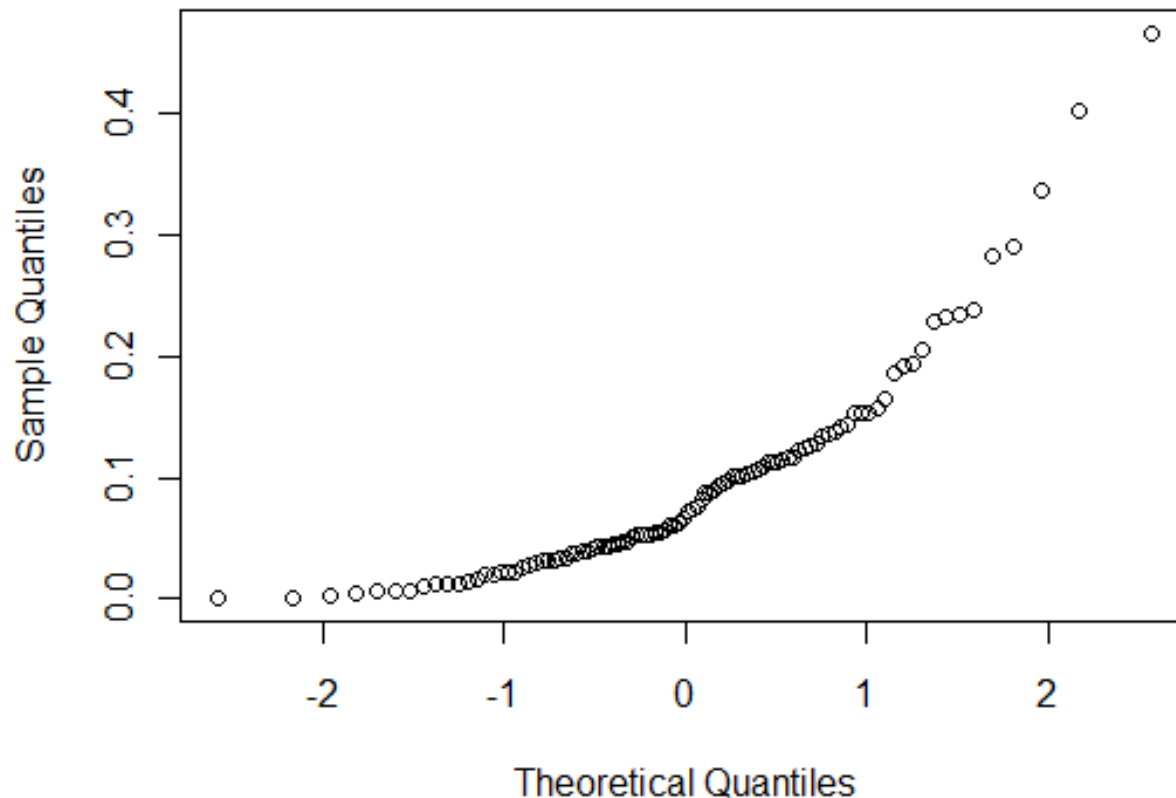
# Example

- Which of the following assumptions appears to be broken based on the residual plot? **Equal variance problem!**



# Example

- Based on the following QQ-plot of the residuals from a model, what are your conclusions about the Normality of errors assumption? **Skewness problem**



# Example

- Mark each of the following as testing for either outliers or influential observations.
  - Cook's D – Influential observations
  - DFBeta – Influential observations
  - Studentized Residuals – Outliers
  - Standardized Residuals – Outliers
  - Leverage – Influential observations
  - DFFits – Influential observations

# Example

- What is the difference between an outlier and an influential observation?
  - Outlier – too large of a residual
  - Influential observation – observation that “drastically” alters the regression line