

APLM: Week 1-2

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Conceptual framework

Intuition vs. Educated Intuition and Educated Guess

Whole might be easier to be understood than part.

Raw data is not helpful; organized or summarized data is.

Systematic way of organizing, analyzing, understanding what happened and predicting the future.

Estimation/Evaluation from partial sample to whole population.

Prediction from the observation from the past.

Reading and Practice

1. Review Simple Linear Regression
2. KNNL, Ch. 5 (NWNK, Ch. 6), Matrix Approach to Simple Linear Regression
3. Download, install and play **R**. Read the sample programs from R classroom.
4. Browse StatLab. Particularly, read the stories and data in DATA and STORY link

Strategy for Regression Analysis

RA Strategy 0: Preliminary

What is the problem

How the result will be used or interpreted (impact of the study)

How the data was obtained (say, nature of the study: Observational vs. Experimental, Cross-sectional vs. Longitudinal, etc)

RA Strategy 2-2

Develop

Caveats, grey or dark sides

Graphs and Stat figures: ways of seeing

Statistical graphs which are commonly employed to help statisticians "see" the data: scatter plot, histogram, normal probability plot, stem-and-leaf plot, box plot.

Reading and Practice

1.