

Outline

Univariate Simple Sampling

Univariate Simple Linear Regression

Univariate Multiple Linear Regression

Review Material
Covering for
Completeness.

Matrix Normal and Matrix-T PDFs

Multivariate Multiple Linear Regression

Bayesian Multivariate Linear Regression

New Material

Discussion

Homework

Univariate Simple Sampling

Model i^{th} Observation:

$$y_i = \beta_0 + \varepsilon_i$$

$\swarrow \mu$

$$E(\varepsilon_i) = 0 \quad \text{cov}(\varepsilon_i) = \sigma^2$$

or equivalently

$$i = 1, \dots, n$$

$$y_i = \underset{1 \times 1}{(1)} \underset{1 \times 1}{\left(\underset{1 \times 1}{\beta_0} \right)} + \underset{1 \times 1}{\varepsilon_i}$$

$\swarrow \mu$

