Course Outline STA2212H/453H1

from the private notebook
of
David Brenner

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ref./text:

Brenner, D. :
FROM THE PRIVATE NOTE BOOK:
    Illustrated adventures in very (very) mathematical
    probability & statistics, 2008-15

Fraser, D.A.S. :

Knight, K. :
MATH STATS (2000)

Lehmann, E.L. :
TESTING STAT HYPs (1957/86) & THRY of PT EST (1986)

Silvey, D.F. :
STAT INF (1976)
- *caution*: all contents subject to shuffling, merging, expansion
& (really serious) modification

- the general statistical model: confidence & likelihood
  - estimation theory: consistency, unbiasedness & minimum
    variance
  - sufficiency & the rao-blackwell theorem
    exponential models
    location-scale models

- the general linear model: correlation, regression
& conditional expectation

- hypothesis testing
  - testing means, variances: differences & ratios
  - neymann-pearson theory & the likelihood ratio test

- bayesian theory

grading \((G)\):

\[
\text{test (T) = 40} \quad \text{Fri. Mar. 24}
\]
\[
3\text{assignments@20 each (A} = A_1 + A_2 + A_3) = 60
\]
\[
G = T + A
\]

(NOTE: test \(T\) will be held during class time.)