Reading Material for Engineering & Industrial Statistics

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http://ecs.syr.edu/faculty/romeu/

Quality and Reliability Institute Web page:
http://ecs.syr.edu/faculty/romeu/QR&CII.htm
DSIAC Web Site:
https://www.dsiac.org/resources/reference_documents2

The statistics papers below are used in ECS526: industrial statistics.

Engineering Education:

Teaching Engineering Statistics to Practicing Engineers
http://www.stat.auckland.ac.nz/~iase/publications/17/4A1_ROME.pdf

Statistical Education of American Engineers
http://web.cortland.edu/romeu/StatEdAmerEng2012Q2-art3.pdf

Professional Organizations and the Learning of Stats after College
Revista Empresarial Inter-Metro; UIA-PR
http://ceajournal.metro.inter.edu/spring13/romeujorge0901.pdf

Group Learning, Contextual Projects, Simulation Models and
Student Presentations in Enticing Engineering Statistics Students.
http://ecs.syr.edu/faculty/romeu/ASAECSEngEd.pdf

The Juarez Lincoln Marti International Education Project:
An Example in Statistical Education and Research
http://www.stat.auckland.ac.nz/~iase/publications/3/3041.pdf

Descriptive: EDA and Distribution Identification:

Data Quality and Pedigree
AMPTIAC Material Ease
http://infohouse.p2ric.org/ref/34/33159.pdf

Random Variables and Statistical Distributions:
A) AMPTIAC Material Ease.
http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.167.5518&rep=rep1&type=pdf
B) RAC Journal
https://www.dsiac.org/sites/default/files/journals/1ST_Q2001.pdf

Empirical Assessment of Normal and Lognormal Distribution Assumptions.
RAC START. Volume 9, Number 6.
https://www.dsiac.org/resources/reference_documents/empirical-assessment-normal-and-lognormal-distribution-assumptions

Statistical Assumptions of an Exponential Distribution.
RAC START: Volume 8, Number 2.
https://www.dsiac.org/resources/reference_documents/statistical-assumptions-exponential-distribution

Empirical Assessment of the Weibull Distribution.
RAC START. Volume 10, Number 3.
https://www.dsiac.org/resources/reference_documents/empirical-assessment-weibull-distribution

Graphical Comparison of Two Populations.
RAC START. Volume 9, Number 5.
https://www.dsiac.org/resources/reference_documents/graphical-comparisons-two-populations

<u>Inference: Estimation and Testing:</u>

Statistics II: On Estimation and Testing
A) RAC Journal (Page 4)
https://www.dsiac.org/sites/default/files/journals/3q2001.pdf
B) AMPTIAC Material Ease
http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.167.5974&rep=rep1&type=pdf

Statistical Confidence.
RAC START: Volume 9, Number 4.
https://www.dsiac.org/resources/reference_documents/statistical-confidence

The Chi-Square: a Large-Sample Goodness of Fit Test
RAC START. Volume 10, Number 4.
https://www.dsiac.org/resources/reference_documents/chi-square-large-sample-goodness-fit-test

Anderson-Darling: A GoF Test for Small Samples Assumptions
RAC START. Volume 10, Number 5.
https://www.dsiac.org/resources/reference_documents/anderson-darling-goodness-fit-test-small-samples-assumptions

The Kolmogorov-Smirnov: a GoF Test for Small Sample Assumptions
RAC START. Volume 10, Number 6.
https://www.dsiac.org/resources/reference_documents/kolmogorov-simirnov-goodness-fit-test-small-samples

Quality Control Charts
RAC START. Volume 11, Number 4
https://www.dsiac.org/resources/reference_documents/quality-control-charts

OC Function and Acceptance Sampling Plans
RAC START. Volume 12, Number 1
https://www.dsiac.org/resources/reference_documents/operating-characteristic-oc-functions-and-acceptance-sampling-plans

Determining the Experimental Sample Size
QR&CII Tutorial. Vol. 1 No. 1.
http://web.cortland.edu/romeu/ExperSampSizeQR&CII.pdf

Understanding Binomial Sequential Testing
RAC START. Volume 12, Number 2
https://www.dsiac.org/resources/reference_documents/understanding-binomial-sequential-testing

Understanding Exponential Sequential Tests
https://www.dsiac.org/resources/reference_documents/understanding-exponential-sequential-tests

Modeling: Regression and Analysis of Variance:

Statistics III: Modeling with Regression and ANOVA
AMPTIAC Material Ease
http://infohouse.p2ric.org/ref/32/31672.pdf
https://pdfs.semanticscholar.org/02c0/0a74bc3c94c8179d6f55abc701b0e7032573.pdf
Journal of the Reliability Analysis Center. Vol. 9, Number 4.
https://www.dsiac.org/sites/default/files/journals/4q2001.pdf

On Regression Analysis
RIAC RelTique. Vol. 1, No. 1.
http://web.cortland.edu/matresearch/RELTIQUES_V1N1.pdf

Combining data.
RAC START. Volume 11, Number 2.
https://www.dsiac.org/resources/reference_documents/censored-data

MINITAB and Pizza: A Workshop Experiment
Journal of Educational Technology Systems (JETS)
http://web.cortland.edu/romeu/Minitab&Pizza.pdf
https://www.researchgate.net/publication/237389660_Minitab_and_Pizza_A_Workshop_Experiment

Measuring Cost Avoidance with Messy Data
Proc. of the 2004 Reliability and Maintainability Symposium (RAMS).
http://web.cortland.edu/romeu/RAMSPaper.pdf

Design and Evaluation of Aquatic Ecosystems via Simulation
Federal Conference on Statistical Modeling
http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.105.349

Design of Experiments for Reliability Improvement:
Fractional Factorial Designs
https://www.quanterion.com/design-of-experiments-for-reliability-improvement/

Reliability Modeling and Analysis:

Reliability Estimations for Exponential Life
RAC START. Volume 10, Number 7.
https://www.dsiac.org/resources/reference_documents/reliability-estimations-exponential-life

Censored Data.
RAC START. Volume 11, Number 3.
https://www.dsiac.org/resources/reference_documents/censored-data

Understanding Series/Parallel Systems
RAC START. Volume 11, Number 5.
https://www.dsiac.org/resources/reference_documents/understanding-series-and-parallel-systems-reliability

Understanding Availability
RAC START. Volume 11, Number 6.
https://www.dsiac.org/resources/reference_documents/availability

Understanding Logistics
RIAC RelTique. Vol. 1, No. 3.
http://web.cortland.edu/romeu/LogisticsREL_V1N3.pdf

Understanding Binomial Sequential Tests
RAC START Vol. 12, Number 2
https://www.dsiac.org/resources/reference_documents/understanding-binomial-sequential-testing

A Discussion on Software Reliability Models
Journal of the Reliability Analysis Center. Vol. 8, Number 1.
https://www.dsiac.org/resources/legacy_journals/journal-rac-vol-8-no-1- discussion-software-reliability-modeling-problems

Determining the Experimental Sample Size.
Journal of the Systems Reliability Center (SRC)
3rd Quarter 2005; pp. 11-21

Use of Bayesian Techniques for Reliability
RAC START. Volume 10, Number 8.
https://www.dsiac.org/resources/reference_documents/use-bayesian-techniques-reliability

Operations Research and Statistics Techniques:
a key to Quantitative Data Mining
http://web.cortland.edu/romeu/ORStatTechInDataMine.pdf

Determining the Experimental Sample Size.
Journal of the Systems Reliability Center (SRC)
3rd Quarter 2005; pp. 11-21

Understanding Availability
ASQ Statistics Division Newsletter
Vol. 24, No. 1: Fall 2005 (pp. 4--10)
http://www.asqstatdiv.org/documents/newsletters/Fall05StatDiv.pdf

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