
Texts in Probability and Statistics

For the very basics of probability and Statistics, in a very practical interesting approach, see Hayter (2007). For intermediate level see Wackerly et al. (2001). For more theoretical details see Casella and Berger (2002).

Texts in Linear Algebra and Matrix Theory

The fundamentals of Linear Algebra could be found in Strang (2003). The website <http://web.mit.edu/18.06/www/> is a companion to this text. It is an invaluable source where you can find the video lectures of professor Gilbert Strang, the author of the book, at the MIT.

For more details and mathematical proofs in linear algebra and matrix theory see Schott (2005) or Searle (1982).

Texts in Pattern Recognition and Statistical Learning

The very famous book Duda et al. (2001) provides the breadth-first approach to pattern classification. It does not require a very strong level in mathematics. Another through book—yet, requires a stronger level in mathematics—is Hastie et al. (2001). A text that has a mixed style of the previous two books is Bishop (2006).

Mathematical treatments for pattern classification with more emphasis on Multinormal assumptions can be found in Fukunaga (1990), and McLachlan (2004).

Other books in learning from data are Cherkassky and Mulier (1998); Vapnik (2000).

References

- Bishop, C. M. (2006). *Pattern recognition and machine learning*, Information science and statistics, Springer, New York. Christopher M. Bishop. ill. (some col.); 25 cm.
- Casella, G. and Berger, R. L. (2002). *Statistical inference*, Duxbury advanced series, 2nd edn, Duxbury/Thomson Learning, Australia; Pacific Grove, CA.
- Cherkassky, V. S. and Mulier, F. (1998). *Learning from data: concepts, theory, and methods*, Wiley, New York.
- Duda, R. O., Hart, P. E. and Stork, D. G. (2001). *Pattern classification*, 2nd edn, Wiley, New York.
- Fukunaga, K. (1990). *Introduction to statistical pattern recognition*, Computer science and scientific computing, 2nd edn, Academic Press, Boston.
- Hastie, T., Tibshirani, R. and Friedman, J. H. (2001). *The elements of statistical learning: data mining, inference, and prediction*, Springer series in statistics, Springer, New York.
- Hayter, A. J. (2007). *Probability and statistics for engineers and scientists*, 3rd edn, Thomson Brooks/Cole, Belmont, Calif.
- McLachlan, G. J. (2004). *Discriminant analysis and statistical pattern recognition*, Wiley series in probability and statistics, Hoboken, N.J.
- Schott, J. R. (2005). *Matrix analysis for statistics*, Wiley series in probability and statistics, 2nd edn, Wiley, Hoboken, N.J.
- Searle, S. R. (1982). *Matrix algebra useful for statistics*, Wiley series in probability and mathematical statistics. Applied probability and statistics,, Wiley, New York.
- Strang, G. (2003). *Introduction to linear algebra*, 3rd edn, Wellesley-Cambridge, Wellesly, MA.
- Vapnik, V. N. (2000). *The nature of statistical learning theory*, Statistics for engineering and information science, 2nd edn, Springer, New York.
- Wackerly, D. D., Mendenhall, W. and Scheaffer, R. L. (2001). *Mathematical statistics with applications*, 6th edn, Duxbury, Pacific Grove, CA. Dennis D. Wackerly, William Mendenhall III, Richard L. Scheaffer. ill.; 24 cm.