DESCRIPTION

AN INTRODUCTION TO MACHINE LEARNING THAT INCLUDES THE FUNDAMENTAL TECHNIQUES, METHODS, AND APPLICATIONS

PROSE Award Finalist 2019

Association of American Publishers Award for Professional and Scholarly Excellence

*Machine Learning: a Concise Introduction* offers a comprehensive introduction to the core concepts, approaches, and applications of machine learning. The author—an expert in the field—presents fundamental ideas, terminology, and techniques for solving applied problems in classification, regression, clustering, density estimation, and dimension reduction. The design principles behind the techniques are emphasized, including the bias-variance trade-off and its influence on the design of ensemble methods. Understanding these principles leads to more flexible and successful applications. *Machine Learning: a Concise Introduction* also includes methods for optimization, risk estimation, and model selection— essential elements of most applied projects. This important resource:

- Illustrates many classification methods with a single, running example, highlighting similarities and differences between methods
- Presents R source code which shows how to apply and interpret many of the techniques covered
- Includes many thoughtful exercises as an integral part of the text, with an appendix of selected solutions
- Contains useful information for effectively communicating with clients

**STEVEN W. KNOX** holds a Ph.D. in Mathematics from the University of Illinois and an M.S. in Statistics from Carnegie Mellon University. He has over twenty years’ experience in using Machine Learning, Statistics, and Mathematics to solve real-world problems. He currently serves as Technical Director of Mathematics Research and Senior Advocate for Data Science at the National Security Agency.

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**ABOUT THE AUTHOR**

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