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Section I. Fundamental Concepts and Theories

This section serves as a foundation for this exhaustive reference tool by addressing crucial theories essential to the fundamental understanding of machine learning. Chapters found within these pages provide an excellent framework in which to position machine learning within the field of information science and technology. Insight regarding the critical incorporation of global measures into machine learning is addressed, while crucial stumbling blocks of this field are explored. With 10 chapters comprising this foundational section, the reader can learn and chose from a compendium of expert research on the elemental theories underscoring the machine learning discipline.

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V. Ravi, Institute for Development and Research in Banking Technology, India
M. R. Patra, Berhampur University, India

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practitioners in developing viable and effective machine learning programs and processes. This sec-
tion includes 20 chapters that review topics from Greece, The Netherlands, Australia, the United States,
and many more countries, with dozens of institutions and cultures from around the world represented.
A variety of chapters discuss machine learning in a wide range of settings (medicine, higher educa-
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Elena V. Astapova, Medical College of Georgia, USA
Hui-Lien Tung, Paine College, USA
Donald A. Sofge, Naval Research Laboratory, USA
James Grayson, Augusta State University, USA
Margo Bergman, Michael E. DeBakey VA Medical Center, USA
Joseph Wood, US Army, USA
William Lawless, Paine College, USA

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Małgorzata Łucińska, Kielce University of Technology, Poland
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Section VI. Managerial Impact

This section presents contemporary coverage of the social implications of machine learning, more specifically related to the corporate and managerial utilization of information sharing technologies and applications, and how these technologies can be facilitated within organizations. Core ideas such as human resource management, supply chain forecasting, energy allocation, and software development technologies all pervade the section to give a clearer picture of the impact machine learning has on management styles across different industries. Equally as crucial, chapters within this section discuss how leaders can manage corporate responsibility in order to foster desired intangibles in their employees.

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Chapter 8.1. Learning with Partial Supervision
Abdelhamid Bouchachia, University of Klagenfurt, Austria

Chapter 8.2. Brain-Like Processing and Classification of Chemical Data: An Approach Inspired by the Sense of Smell
Michael Schmuker, Freie Universität Berlin, Germany
Gisbert Schneider, Johann-Wolfgang-Goethe Universität, Germany

Chapter 8.3. Modern Approaches to Software Engineering in the Compositional Era
Ali Dogru, Middle Eastern Technical University, Turkey
Pinar Senkul, Middle Eastern Technical University, Turkey
Ozgur Kaya, Middle Eastern Technical University, Turkey

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