

Preface

Rough Set Theory was introduced by Pawlak in the early 1980's. In the last quarter century it has become an important part of soft computing and has proved its relevance in many real-world applications.

While initially most of the articles on Rough Sets had been centered on theory, currently the focus of the research has shifted to practical usage of mathematical advances. A state of the art survey on Rough Sets from an application perspective is highly desirable but still missing.

The book is written for business and industry professionals who would like to evaluate the potential of Rough Sets. The intended readership includes (1) managers looking for methods to improve their businesses, (2) researchers in industrial laboratories and think tanks who are investigating new methods to enhance efficiency of their solutions, (3) researchers at universities who want to use Rough Sets to solve real-world problems and seek for guidance on how to describe their ideas in a way understandable for the industry readers.

The approach to Rough Sets presented in the following chapters differs from the most of articles in other publications on this subject. This book focuses on practical use cases backed by sound theory, in contrast to the presentation of a theory applied to a problem. Furthermore, it provides a unified view and easily accessible description of applications.

The book covers methods in data analysis, decision support, as well as management and engineering in order to show the great potential of Rough Sets in almost any domain. The number of real-world applications of Rough Sets has increased significantly and goes probably into hundreds. Hence the book can only give a sample of the selected practically relevant case studies.

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