

Oleg Okun, Giorgio Valentini, and Matteo Re (Eds.)

Ensembles in Machine Learning Applications

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Ensembles in Machine Learning Applications

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*Alla piccola principessa Sara, dai bellissimi
occhi turchini*

– Giorgio Valentini

To Gregory, Raisa, and Antoshka

– Oleg Okun

Preface

This book originated from the third SUEMA (Supervised and Unsupervised Ensemble Methods and their Applications) workshop held in Barcelona, Spain in September 2010. It continues and follows the tradition of the previous SUEMA workshops – small international events. These events attract researchers interested in ensemble methods – groups of learning algorithms that solve a problem at hand by means of combining or fusing predictions made by members of a group – and their real-world applications. The emphasis on practical applications plays no small part in every SUEMA workshop as we hold the opinion that no theory is vital without demonstrating its practical value.

In 2010 we observed significant changes in both workshop audience and scope of the accepted papers. The audience became younger and different topics, such as Error-Correcting Output Codes and Bayesian Networks, emerged that were not common at the previous workshops. These new trends are good signs for us as workshop organizers as they indicate that young researchers consider ensemble methods as a promising R&D avenue, and the shift in scope means that SUEMA workshops preserved the ability to timely react on changes.

This book is composed of individual chapters written by independent groups of authors. As such, the book chapters can be read without following any pre-defined order. However, we tried to group chapters similar in content together to facilitate reading. The book serves to educate both a seasoned professional and a novice in theory and practice of clustering and classifier ensembles. Many algorithms in the book are accompanied by pseudo code intended to facilitate their adoption and reproduction.

We wish you, our readers, fruitful reading!

Malmö, Sweden
Milan, Italy
Milan, Italy

Oleg Okun
Giorgio Valentini
Matteo Re
May 2011

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