Lecture Notes in Artificial Intelligence 3176

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Advanced Lectures on Machine Learning

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Preface

Machine Learning has become a key enabling technology for many engineering applications, investigating scientific questions and theoretical problems alike. To stimulate discussions and to disseminate new results, a series of summer schools was started in February 2002. One year later two more of such summer schools were held, one at the Australian National University in Canberra, Australia, and the other one in the Max-Planck Institute for Biological Cybernetics, in Tübingen, Germany.

The current book contains a collection of main talks held during those two summer schools, presented as tutorial chapters on topics such as Pattern Recognition, Bayesian Inference, Unsupervised Learning and Statistical Learning Theory. The papers provide an in-depth overview of these exciting new areas, contain a large set of references, and thereby provide the interested reader with further information to start or to pursue his own research in these directions.

Complementary to the book, photos and slides of the presentations can be obtained at

`http://mlg.anu.edu.au/summer2003`

and

`http://www.irccyn.ec-nantes.fr/mlschool/mlss03/home03.php.`

The general entry point for past and future Machine Learning Summer Schools is

`http://www.mlss.cc`

It is our hope that graduate students, lecturers, and researchers alike will find this book useful in learning and teaching Machine Learning, thereby continuing the mission of the Machine Learning Summer Schools.

Tübingen, June 2004

Olivier Bousquet
Ulrike von Luxburg
Gunnar Rätsch

Empirical Inference for Machine Learning and Perception
Max-Planck Institute for Biological Cybernetics

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Local Arrangements

Canberra

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Tübingen

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Canberra

- Research School of Information Sciences and Engineering, Australia
- The National Institute of Engineering and Information Science, Australia

Tübingen

- Centre National de la Recherche Scientifique, France
- French-German University
- Max-Planck Institute for Biological Cybernetics, Germany

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