

Breakthrough in Applied Machine Learning



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Editors

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PREFACE

The purpose of *Breakthrough in Applied Machine Learning* is to demonstrate how machine learning has progressed from theory to solution for real-world problems. While the field is often presented in abstract or highly technical terms focusing on algorithms, this book highlights how methods such as decision trees, support vector machines, deep learning, and transfer learning can be applied effectively in healthcare, logistics, agriculture, finance, and public safety.

The scope of this book balances conceptual foundations with case studies, including heart disease prediction, demand forecasting, crime mapping, child malnutrition analysis, and agricultural innovation. It is dedicated to students, researchers, professionals, and policymakers who wish to understand how machine learning works in practical implementation.

The storyline of this book, from fundamentals to application, encourages readers to advance machine learning as an innovative tool for the benefit of society. Our experiences as educators and researchers inspired this work, and we thank our colleagues, contributors, and families for their support.

Nor Erne Nazira Bazin

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